

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

104th MONTHLY ISSUE

WEB CAMERAS

Bring Real Time Reality to Your Desk

69 Web Video Camera Sites

How to Add a Webcam To Your Own Web Site

**Spinnaker: Web BBS
from Searchlight Software**

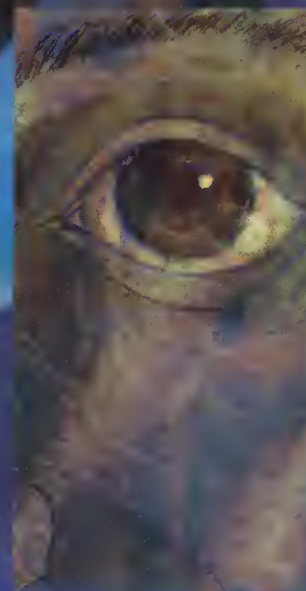
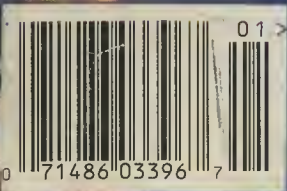
**Excalibur: The Quiet
Client / Server**

**WinGate: How to Use
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**BeBox: A Hot New Computer
and Operating System**

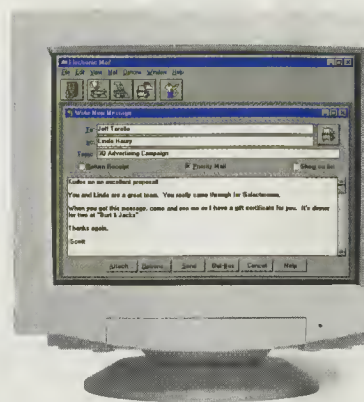
100 Web Sites For All Occasions

Internet Gambling Legalities



Wow! You can do all of

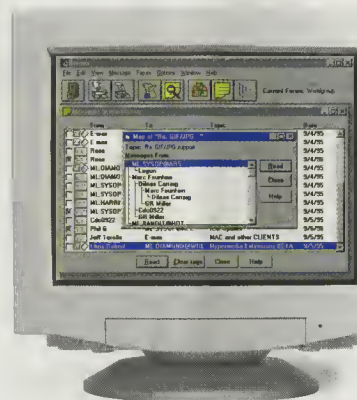
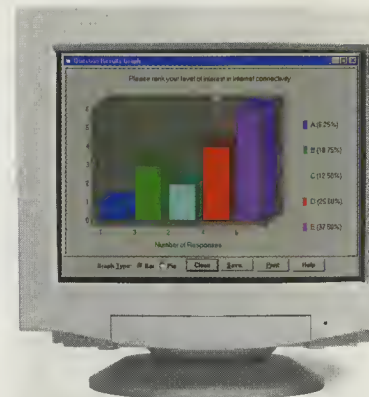
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this over the Internet?!!

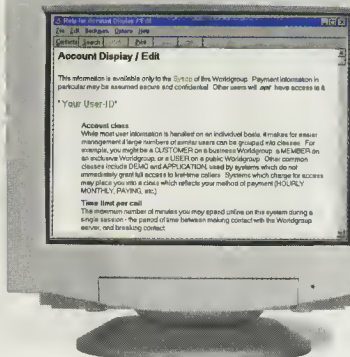
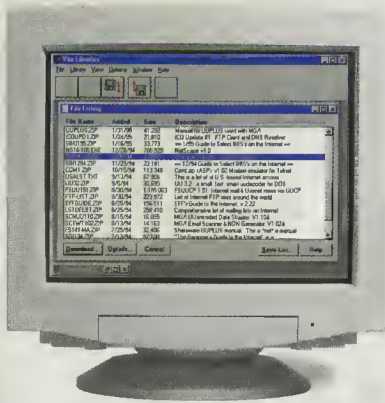
Users can chat, whisper, sketch diagrams and exchange files with each other in the multiuser teleconference.



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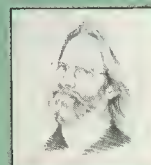
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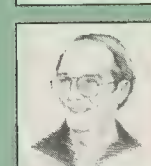
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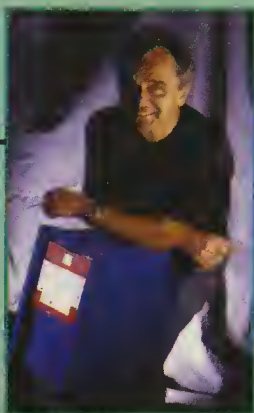
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Okay, Phil . . .

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I'm telling them!

Memorandum

eSoft

To: Alan Bryant, Director of Marketing
From: Phil Becker, President
Re: Internet Protocol Adapter (IPAD)

Alan,

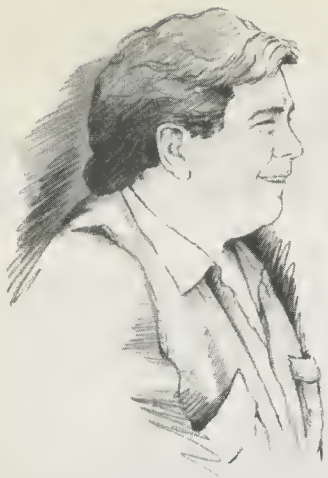
Over the past two years our engineers have taken the hardware from design to production and completed a full one year field test to prove that the IPAD really is the Internet Connectivity Appliance we set out to make. Those lucky enough to find out about the test program and get an IPAD have clearly said that it is a winner – it allowed most of them to have their Internet connection up and running in a single day! The IPAD even won the Dvorak Award for Telecommunications Excellence!

I know you're aware that we've implemented our "100% solution" program allowing us to sell a quality leased line to the Internet, the CSU/DSU to connect it, the IPAD and, if the customer wants it, even fully configured web servers with either WebSite or Netscape software to make a total Internet presence!

We've even put in place our Certified System Integrator program so we can support integrators who install systems based on IPADs, and you know that the production line is running and IPADs are available for immediate delivery!

As I remember it, you are our Director of Marketing. So how come you haven't yet told a SINGLE PERSON that they can buy IPADs NOW!?! Quit staring at that blueprint and tell them that if they call eSoft at (303) 699-6565 they will no longer be alone in the Internet Jungle. Make their life easier – tell them to call and find out about this hot stuff! I promise you they'll thank you for it.





EDITOR'S NOTES

WEBDREAMS - WATCHING THE GRASS GROW

The Boardwatch crew has pretty much been running free-rein for several issues. Steve Jenkins and I have gone off into Windows95 land on how to hook things up over the Internet, and everyone else has pretty much done as they like. This issue I've rather come down with a theme and arm wrestled our Editor At-Fault, David Hakala, Chris Babb, and Mike Erwin into joining forces to do one just for me. So if you find Webcams just too trivial, I'm the guilty party. OK, they're kind of a stupid application of the network at face value. But I'm thoroughly intrigued.

Webcams are simply video cameras aimed out a window somewhere and connected to a web site. They aren't really doing video, but rather acting as digital snapshot cameras. But I'm fascinated by them, and more, by what they could become. They are really low res, slow, and purposeless at this point. But potentially, they could be high resolution, very fast and purposeless in the future.

The fascination is in the non-virtual reality aspect of it. They ARE reality. Instead of Jay Leno entertaining us, the Dallas Cowboys playing their hearts out, or the drama of a Congressional budget standoff, they represent the boring absurdity of real life captured in real time. A webcam of Wilshire Boulevard, showing Hollywood as not so very exciting - more like a bus stop bench with people appearing and disappearing as the day crawls on. A shot of Pikes Peak, with no Pike, and not much of a peak in the action - sunset if you are lucky. Grey fog and snow if you catch it at a bad moment, and all the action of watching a mountain erode in real time.

But it IS real. And in the future could be utterly fascinating. Picture a web

cam on the nose of an undersea exploration submarine, and you are seeing the ocean bottom at the same time that the explorers are. Picture it in high resolution real time video with sound. If you grow bored, you can go look at internal and external shots of the latest space probe or shuttle mission - and actually have a better view of the action (or inaction) than the crew does. It's not only not unthinkable, it is not so very hard to do.



*Watch the sea life grow -
from your home*

Picture THOUSANDS of these real-time video webcams sprinkled around the planet, with full screen 30 frame-per-second real-time video and sound capabilities. It appears to be inevitable. We need some hardware, a little more CPU speed, and some net bandwidth, all predictably on the way and in fact with early implementations readily available now. I understand the compression and bandwidth problems - a time/resource function with an already inevitable conclusion and likely an 18 month time frame.

So in a couple of years, I can sit at my desk and "go" to any city in the world and have a look at it. I can see it and



hear it, not in retrospect from some canned capture of it, but in real time. If there is an earthquake in Sao Palo, we can all go look at it ourselves - perhaps choking all Internet access to the country, but we can look. We can look NOW. Students studying volcanoes can go LOOK at volcanoes in real-time - up to the moment the camera burns up. Mobile cameras. Cameras in the belly of commercial airline flights. In fact, why do we sit in these cigar tubes full of people meat now staring at each other, our laptops, and our pretzels while we fly over one of the grandest natural vistas in the world? Why don't they put up some big screens on these airplanes, a video camera in the belly, and let us ALL have a window seat? After a couple of recent truly horrifying experiences with the all encompassing, nay, breathtaking stupidity of Continental Airlines, I can surmise that these companies are largely operated by morons in search of adult supervision and some one will have to demonstrate a television for them in about 60 repetitions before they would comprehend it, but it is technologically trivial. All the pieces are laying around in the aircraft now. In an industry that has cut out cold slimy sandwiches for their clientele because they cost too much of the \$400 ticket price, I guess I don't see it happening. Pray for peanuts.

But the reach and grasp of the Internet opens a new panorama of viewing possibilities. Let's blue sky here a bit. I've got a basement. Everyone not living in Florida or California has one. They can be a bit dreary largely because the view from basements is notoriously poor. Further, the view from a lot of office buildings, particularly security conscious office buildings is notoriously poor. Let's take some pieces of technology laying around in some predictable stage of development and make something interesting. Let's take the 10.4-inch active-matrix thin-film-transistor color display from our laptop computer and blow it up to the size of the white board on my wall. Let's build a window frame around it that looks a lot like a window but has a good sound system built into it. Let's take a Pentium Pro CPU with a PCI bus and hook up an Ascend Pipeline 50 ISDN adapter/router and stick that in it. Or better, a cable TV modem that promises us T1 speeds - asymmetrically. Let's build some web browser software that only works a little differently and put some of those infrared touch-screen sensors around the edge.

there, and the ships come and go. And if we tire of that, we can catch a panoramic view of Topeka Kansas - the Manhattan skyline at night, Hong Kong at night - all day long.



Waterfalls in your basement for two cents per day



Flat-panel displays could be windows on the Web

And let's hang it on the basement wall. Now we touch the screen to call up a control panel, and pick San Diego Bay from a list of about 50,000 cameras available. And we have a four-foot by eight-foot view of San Diego bay in real-time high-res video with sound - a panoramic view from our basement. I'm guessing this will brighten up the room considerably. And if they have a yacht race in the bay, we might stop to watch. And if they don't, we have a room with a view anyway.

If we tire of San Diego, and I lived there a couple of years in the seventies and frankly did, we can go watch San Francisco Bay four feet high and eight feet long. We can watch the sunset

But the same wall panel could display a map of the United States - four foot high and eight feet long (or pick your aspect ratio). You could touch Florida and the display zooms in on Florida. Touch Miami and zoom in on Miami. Pick a street. Visual information of all types would be a wave of your hand away. Every painting ever painted would not wait in a tired museum for the terminally interested to trek to see. Mona Lisa can hang in every living room in the country, and The Last Supper in every church. I tire of this. Show me the Vancouver skyline.

If these new, and probably pricey window frames caught on, there could be millions of them in home and offices around the country. They aren't computers. I'm not going to do any word processing here. They are windows. Real windows on the world.

And if I happen to have a view of a particularly scenic Colorado waterfall close at hand, and the wherewithal to connect a really good video camera to

a stout Internet server capable of dishing out packets of video in quantity, why can't I charge people 60 cents per month to view my waterfall - even if it's not mine at all. If 100,000 homes, out of 98 million, want to view and hear the soothing sound and sight of this waterfall in their basement, I can use the \$60,000 monthly income to run the server and perhaps work on adding a classical music background option to my service for another 10 cents monthly. Colorado waterfalls in your basement for two cents per day. I would probably want that if the waterfall was two blocks away. A home with a view.



And best of all, it is real. If a bear comes to the waterfall, we get to watch - millions of us in real-time. Even in New Jersey. And if a tree falls in the forest, and there is no one there to hear, we'll know for sure whether or not it does make a sound.

Jack Rickard





Letters to the Editor

Boardwatch Magazine
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LETTERS TO THE EDITOR

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VISIBLE HUMAN

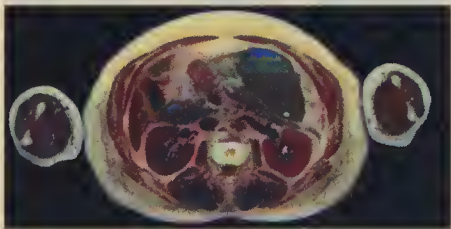
In your Dec. 1995 issue, both you and a reader expressed some confusion about the Visible Human project - whether the cadaver had been scanned (CAT and MRI) or sliced up. Actually, what happened is all of the above. The cadaver was scanned by MRI and conventional CAT and *then* sliced up.

As it happens, slicing is perhaps not the best term for this process. As I understand it, the cadaver was embedded in a square block of something (paraffin I think) and deep frozen. While standing in a bath of dry ice, the top end of the block was then milled off in 1 mm increments. After each milling the block was polished and photographed with a high-resolution digital camera.

The dataset that resulted from the Visible Human project is many gigabytes and can be licensed from the NLM at no cost. Some example images can be seen at http://www.nlm.nih.gov/extramural_research.dir/visible_human.html but the complete dataset is delivered on tape since it's too big to download (at current network bandwidths anyway).

There is an excellent (if somewhat gruesome) video of both the "preparation" process and the computer reconstructions of the Visible Man that was shown last month at the Symposium on Computer Applications in Medical Care in New Orleans. The first cadaver was supplied by a criminal who died by lethal injection. The second, a woman, is currently being "processed."

Ray Duncan
duncan@csmc.edu



Ray:

Quite correct and thanks for the note. The Visible Human sounds like a kind of grisly voyeuristic web prank and on reflection, I rather regret we didn't give this story the

greater attention it deserves. It is actually part of a relatively huge project involving a number of medical science centers, universities, and NCAR to digitize the human body. The results are quite staggering and once completed, will allow individuals to virtually dissect the human body in stunning detail.

The original subject was a convicted murderer, Joseph Paul Jernigan, who was executed by lethal injection. The body was scanned conventionally using Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scans. The body was then immersed in gelatin and chilled to a -160 degrees Fahrenheit. It was then cut into 1878 slices 1 mm thick with the remainder photographed after each slice. The top web site appears to be http://www.nlm.nih.gov/extramural_research.dir/visible_human.html. But these web sites simply provide very crude sample images. Expomed, Inc. offers the full data set in 24-bit color JPEG image files on CD-ROM for just \$29.95. Expomed Inc., P.O. Box 186, Munroe Falls, Ohio, 44262; Telephone 216.688.9620; Fax 216.688.4196; Email expomed@interramp.com

The Center for Human Simulation (CHS) is located in the School of Medicine at the University of Colorado Health Sciences Center in Denver, Colorado, USA. The CHS created the Visible Human Male and Female Datasets under contract with the National Library of Medicine, as part of the Visible Human Project. The National Library of Medicine, an agency of the National Institutes of Health, is located in Bethesda, Maryland, USA, and is funded by the United States Congress. They have completed the Visible Female portion of the project which differs largely in that they have upped the resolution on the female by slicing the cadaver in 0.33 mm slices instead of 1.00 mm. Sample images are available at <http://www.hsc.colorado.edu/chs/vhf.html>

The point of all this isn't people steak cross images. By digitizing this data and developing software, we should soon have a very detailed digital human in both male and female that could be viewed from any angle, or with respect to any organ, bone, or element of interest. The potential here is pretty staggering. The Australian National University has already done some interesting things with the data using a Fujitsu AP1000 SuperComputer at <http://mehta.anu.edu.au:8080/~mohschon/Htdocs/Research/vhp.html>.

Jack Rickard

LAPTOPS IN THE FUTURE

I finally bit the bullet and paid for a two year subscription to Boardwatch. I've been reading your publication since the early hey days (when it wasn't even stapled if I remember correctly) and had never gotten around to subscribing. But every time I pass it up at the newsstand, I always wind up buying it... which costs more per year than subscribing.

I've been a BBS user since 1984 and can wander for days about the old days.. when the biggest computers were APPLE //es and the file houses for Warez were AE Lines. I am definitely more excited about the way BBSs and the Internet are coming together. Using programs like Netscape and Eudora have made getting online so easy and exciting... anyone can do it.

I do have a question, though:

I've always been a big fan of portability. I like laptops.. though I find them limited for what I need right now. I'm a graphic designer and when I'm not doing traditional art, I'm doing it on a Macintosh (which I don't find as capable a telecommunications machine for some reason).. Mac Powerbooks lack the 24 bit video I need for graphic design work which PCs are still not quite there for the same type of work. On the other hand, PCs are great for telecommunications and always have been.

How do you feel about the push of portability? Do you see notebooks becoming a must need. I personally envision a great society where everyone communicates and works through their PC, anywhere they may be. Is that's too far fetched?

Mike..
mikepten@communique.net

Mike:

I don't think so. The big growth in PC sales over the past two years has really been in the laptop market and most of the future growth seems headed there. I'm a bit of a laptop Luddite myself. I've tried several models over the years but I've always felt vaguely like I was simulating the use of a PC rather than using one. First, the displays were poor. The keyboards were small. The memory and hard drive space too limited. And this battery

thing was just a mess with the Nickel Cadmium batteries they used. I wound up hustling a whole suitcase full of stuff through the airport and on arrival at a hotel, it took 30 minutes of plugging cables together to get everything hooked up. Then I'd go out to dinner, get caught up with a bunch of people that were fun to talk to, and not go near the hotel room except to sleep and shower during the entire course of my stay for whatever reason. At the end, I had to unplug all those cables, repack the little bugger, and heave it home. After awhile, I simply didn't take one with me.

But there have been some changes. First, these new lithium ion batteries avoid some of the memory problems the NiCad units featured. And they seem to last a bit longer. The displays have improved dramatically. And memory and hard disk space are now on par with anything on a desktop. The PCMCIA cards have eliminated a lot of the cables and power cords. I'm using a Toshiba Satellite Pro 400 CDT right now and I think we're finally there. It has a 75 MHz Pentium chip, an internal CD-ROM drive, 16 MB of RAM, about 800 MB of hard disk, sound with speakers and microphone, and a pretty decent color display. I DID go through a number of PCMCIA modem cards before landing back in the Hayes camp once again. While desktop modems are pretty much a commodity, there are a lot of badly broken PCMCIA modems floating around these days. In any event, I STILL don't use one when traveling, but I now do often use one back and forth between office and home. So much so, that most of my stuff is generally on the laptop and the desktop unit more or less languishes. I've spoken with several others in the industry that have made this same general transition. So I guess I think it is a sign that laptop computers have bridged some threshold here somewhere along the line and become truly useful.

Jack Rickard

MOLASSES IN NOVEMBER

Even though I am a paid subscriber and have in hand a printed hard copy of the current issue of my favorite technical-cum-social-commentary magazine, I wish to download as a text file Jack's reply to Brother Daniel of the Universal Life Church to sent to a like-minded friend or two.

HOWEVER, the throughput averages 300 bytes/second at 9:30 AM or PM from your server to CSN to my SLIP connection at 28.8 (or thereabouts) to Netscape 1.1N on my Mac. How come, or perhaps, whyzat? Is your server overworked? Is there a convention of gremlins focused on this one connection?

Another matter, when I DO connect and wait (...), I find that the transmission of the 61K letters file stops cold right in the middle of the second paragraph of Jack's reply. Again, whyzat? Any suggestions would be appreciated.

Some general feedback: Thanks for it all, the technical information, the insight into the

net situation from the smallest factoid to the overall strategy of growth and development, the recipes, the humor (inadvertent and intended, and the ambiguities thereto), and the cumulative impression that there really is something coherent happening on the net. I actually find most valuable, these days, the Ed. Rot. diatribes—first, because of their inherent virtues, and second, because they remind me of some of my own. It is very good to know that there are others out there who see things much the same as I, and that sensible, even compassionate, judgement still has a toehold on the leading edge of the net-surf board.

Hang Ten, Babe
Alexander Carpenter
alexander@ini.com
Boulder Colorado

Mr. Carpenter:

Pleased we're hitting the mark in Boulder. As to the connection problems, I can only guess, and perhaps provide you with some background on our system. The Internet contains a lot more connection points than the two modems and a telephone line that were required to connect to a BBS. While the media touts the Internet as the Information Ferrari, it looks like a Stanley Steamer to me and I marvel daily that it all more or less hangs together at all.

We have a 1.544 Mbps T1 leased line connection to the Boulder Coop. They were connected to the Sprint backbone via a T1 until just recently. At this point they ARE the Sprint backbone point in Colorado with a T3 connection. Our server is a little 100 MHz 486 box running NT. It seems to be handling the load we get pretty well. We're doing about 16000 hits per day representing approximately 1000 unique persons. It does not appear to be significantly loaded. The slowness could be anything from you having a full hard disk on up the line to us. With a 28.8 kbps connection, you should certainly get a better rate than that. I also have no clue why a file would stop dead in the middle.

Jack Rickard

DOMAIN NAME REGISTRATION

Jack,

First of all, my compliments on your magazine. I look forward to the monthly information and insights in your publication.

I would like to address a point that was raised in your November issue, Telebits, regarding the cost to register domain names. I can see the purpose of a company requesting to register a domain name for it's company name, and maybe even for it's products. But using generic words and terms for every affliction known to man as registered domain names seems excessive. I have seen this practice briefly mentioned by other publications, yet no one addresses the fact that this is going to add to the information over-

load on the internet, while providing little or no benefit.

It is also my understanding that unless a company makes consistent use of a registered domain name, InterNIC will cancel the registration and offer it to someone else.

My questions are,

What is the true purpose of a domain name?

Is it really necessary or advantageous for a company like Proctor & Gamble to register over 90 domain names, including diarrhea.com?

Will staking claim to "desirable" names yield any competitive advantage?

Why does interNIC now refuse to register multiple domain names for other subscribers, even if they're willing to pay the \$50?

It seems that at the very least, the rules should be applied equally to all members of the internet community. Large, commercial organizations should not get preferential treatment. I also think it's unfair to penalize individual domain name registrants for the actions of those who register multiple domain names.

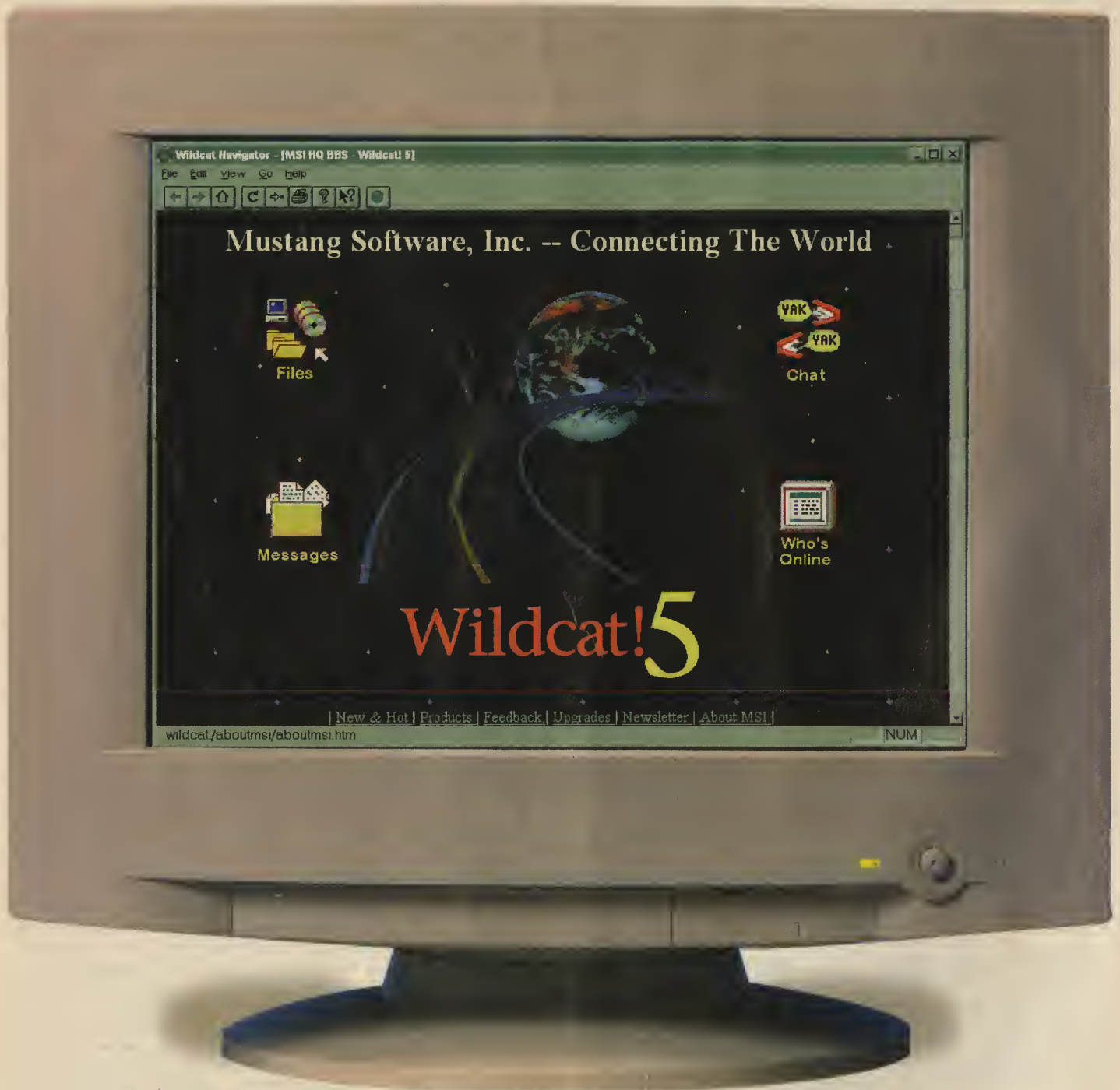
Thank you,
Steve Tsorvas
tsorvass@cris.com

Steve:

We've been looking at this quite a bit. First, we have found numerous instances of domain names registered several years ago with no activity that have not been cancelled by InterNIC. I think they are aspiring to this policy, but haven't quite found a way to track all of them down at this point.

The true purpose of a domain name is to uniquely identify a group of computers operating in the same domain, and to do so in human usable form. Technically, all computers on the Internet are indentified by Internet Protocol number consisting of four octets in the form 204.144.169.1. The domain name system allows you to associate a mnemonic name that you might remember with such a machine. Domain registration allows you to claim a specific top level domain. Boardwatch.com is our unique domain within the .COM top level domain. We can then name up to 255 machines using our Class C address as anything we want in the form of www.boardwatch.com, mail.boardwatch.com, nt.boardwatch.com, alpha.boardwatch.com, and we could easily extend this to lap.top.jack.boardwatch.com and desk.top.jack.boardwatch.com if we wished.

Is it necessary or advantageous for Proctor and Gamble to register diarrhea.com? I'm not sure. The theory is that the cigar vendor that registers cigar.com has a competitive advantage over all other cigar vendors. This



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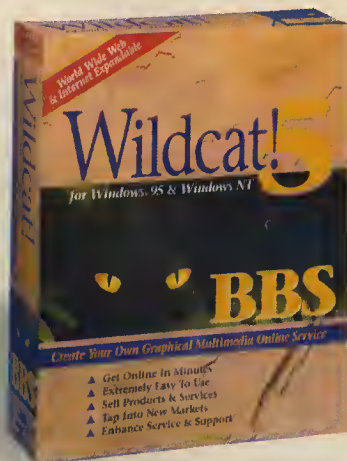
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derives from experience with 800 numbers actually. A relatively obscure florist picked up the 800-FLOWERS toll free number and went on to grow dramatically beyond his own flower shop just by having this easily remembered 800 number where you could order flowers. The theory is that it will work the same with generic domain names. I personally rather think not, but in select instances it could. Time will tell.

Will staking a claim to desirable names yield a competitive advantage? It could. But more importantly, you need to register YOUR domain name. The problem is that the logical and recognizable domain name for any number of companies may be common to them all, and the nature of the Internet is that only ONE can have it. Note that they might each have very protectable tradenames registered that don't even resemble each other. There was actually such a case in court between Fry's Electronics and Curly Frys. Fry's Electronics was a popular computer hardware/software store. Curly Frys made a potato product. But only one can have frys.com. So there are some real conflicts and so many names have been registered already that some companies are having a very difficult time devising a domain name that even resembles the name of their firm. This has set off a registration panic that has seriously bogged down the process and resembles nothing so much as the Oklahoma Land Rush of the last century.

To my knowledge, InterNIC does not refuse to register multiple domain names.

I agree that any rules developed should be applied with universal fairness across the community from the least frequent web hoper to IBM and Microsoft. I can think of no situation in the historical past where anything has been done that way. But it again should be.

Jack Rickard

EDIT! LETTERS TO THE EDITOR IN ISSUE 5 >:-D

Hi, Jack,

I'm a UK journalist, who is now into my second issue of your "plucky little magazine" (see letter from John Rouse, Boardwatch magazine, November 1995 issue). I can live with typos (or literals, as we say in the UK) and most are quite amusing.

For example, I luv your FABLE OF CONTENTS November 1995. Of course, the old adage about the "pot calling the kettle black" always applies, doesn't it? I'm only relieved that some of my more outrageous faux pas are no longer generally remembered!

I hope your publication remains available across here in the UK and as it stands without the need for a "UK edition"; it's by reading what is going on Stateside that guys like me can try to stay ahead.

My warmest wishes,
Yours sincerely,

Peter R...
CROBSON@delphi.com
Voice/fax (UK) 01780 57836
also 100104.641@compuserve.com

Peter:

Thank you very much for your warm note. I'm very pleased we've made the trip across the pond. As to literals, some are typos, and others are whimsy. It generally brings out the pedantic in some portion of our readership, but for the most part we find the process fun.

As far as I know, we've actually increased newsstand distribution in the UK recently.

Jack Rickard

I YIELD, I'LL SUBSCRIBE!

Dear Jack:

I got my first computer 18 months ago, followed by my first Boardwatch (from the grocery store). Couldn't understand either one at first, but have come a long way with both. Thank you for a great learning tool. Thanks for putting the magazine online. Thanks for the free 100th issue. Your editorials are priceless, the recipes, excellent. I give up—I must subscribe!

As for those that criticize the typos, I am reminded of a club newsletter which ended each issue with the statement: We try to provide something for *all* our readers—including typos for the eagle-eyed!

But the young boy strapped in the baby carriage is a classic.

Sincerely,
Gay Eckes
raven@rmii.com or
gdeckes@ix.netcom.com

Gary:

We're very pleased to have you among our regular subscribers. Thanks.

Jack Rickard

ANOTHER POINTLESS LETTER

Yo Jack,

Looks like THEY don't know Jack either. Check out page 48 of the November Egghead catalog for the new "You Don't Know Jack — the irreverent quiz show party game." It's a new CD from Berkeley with a gentleman on the box front that looks rather leaner but also substantially less hairfull than yours truly.

"Here's a sample question," says the catalog: "Which is NOT a dish the Denny's menu

[sic]? a. Scram Slam; b. Senior Belgian Waffle Slam; c. Paj-Ham-A-Party; or d. Moons Over My Hammy." a and d are real for sure; offhand, my money's on b.

In other news: I'm compiling a list of the various accolades frequently encountered in the letters section. I figure maybe I can distill them down into half a dozen or so that will serve for 90% of the people 90% of the time. Then they can be declared as global constants, placed in a little framed box and simply referenced by most writers, freeing up more space for substance (uh, like this, for instance) without completely expurgating the well-deserved blah blah blah. Carry on . . .

Mark Tough
mail109081@pop.net

PS: Glad to see BW plugged in Jay Levison's not-too-informative Guerrilla Advertising Online. Having complained about the cover of the mag once previously and empathized with other anal proofreader types who've criticized your copy editing, it's only fair to congratulate you on NOT making the mistake that permeates Levinson's book, and too many newspaper articles on the Web besides. Levinson's overzealous copy editor probably felt warm inside about changing "World Wide Web" to "Worldwide Web." Is this grammatically correct? Yup. Does that make it right? Not on your life.

Mark:

Thanks for the kudos. And you point up a problem we've struggled with since 1987 - emerging tech text. There are constant battles (multiline/multi-line, on-line/online) as well as truly embattled verbiage (Internet Service Provider or Internet Access Provider). We do the best we can along the way.

Jack Rickard

PUBLIC KEY CRYPTOGRAPHY

Dear Jack:

Congratulations on a fine magazine (you managed to hook my father and he isn't even a 'Net head).

In response to Joe Doll's letter to the editor [Oct 95, p20] you raise a question about using a public key encryption scheme for user authentication. Your argument that using different passwords keeps the sysops (or anyone who has compromised a system) from reusing the password on other systems is valid in a world where the password's text is fixed. The right way to use public key encryption is in a challenge-response mode:

- (1) Joe dial's up GenericBBS and says in the clear: "Hi, I'm Joe."
- (2) GenericBBS issues a challenge string to Joe; the challenge string must include time sensitive data and should attempt to be random.
- (3) Joe encrypts the challenge string with his private key and returns it to the computer along with his identity.



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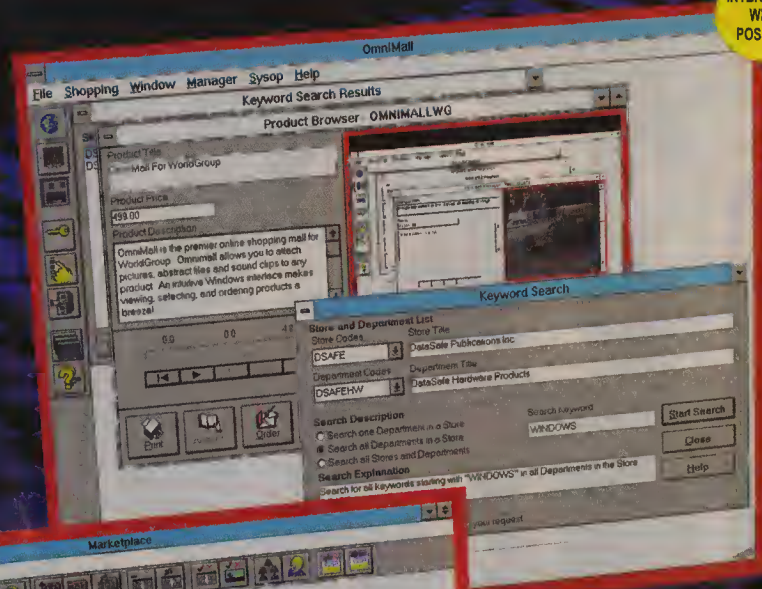
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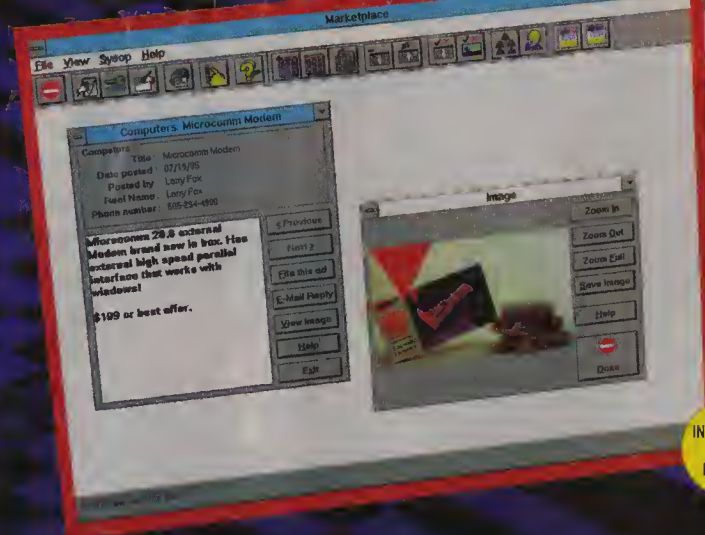


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(4) GenericBBS decrypts the encrypted string and checks that it matches the challenge string sent.

Even if GenericBBS is a front for the Federal Bureau of Intrusive Impersonation and kept a record of all Joe's responses to all challenge strings, as long as the challenges are time-stamped and changing, it is unlikely that any other BBS or ISP or bank or whatever would issue the same challenge string. Only if that happened could one of the recorded responses be used to defeat the security.

This does not totally mitigate your argument that this whole scheme may be more cumbersome than managing n passwords. If you trust the physical and electronic security of your own computer, it could be programmed with your keys and respond automatically to the challenge. Or a card reader or PCMCIA card with your key could permit you to keep the key on your person. Or an auxiliary computing device (I've seen them the size and shape of calculators) could be employed.

In any case, verification (that someone online is who they claim to be) in some legally non-repudiatable way is going to be a very big deal as more commerce moves into the frontier we call the Internet. Public key encryption offers many useful answers for security and privacy if we can resist the government's pressure remove powerful encryption from the hands of private citizens.

Regards, -bcl

Brian C. Ladd
Graduate Student & *NIX Court Jester:
University of North Carolina, Chapel Hill
<http://www.cs.unc.edu/~ladd/>

Brian:

What you describe is similar to the Password Authentication Protocol (PAP) and actually more related CHAP processes for Point-to-Point-Protocol connections. It's a pretty good system actually. The keys, to be usefully secure, are longer and more unwieldy than passwords. I generally do NOT like security provisions requiring hardware and yes, simpler is generally better in software as well. You are probably correct that verification will become more important in the future. But the weak link always seems to be the humanoids - not the computers.

But yes, I do understand that the private key is never transmitted and cannot be reproduced from the encrypted string. And this model will probably be the most popular in coming months.

Jack Rickard



COMMENT AND QUESTION.

Boardwatch

First, I would like to compliment you guys and girls on the excellent job you do each month. I manage a book store (Atlantic Books) in

Cherry Hill, NJ. I've been reading Boardwatch ever since we started carrying magazines. I almost have it down to when the next issue comes in. Keep up the good work.

I am trying to locate a BBs door with a American Indian theme. Would you happen to know of any? Or could you point me in a couple of directions? Thanks in advance.

John Micciche
chief74@water.waterw.com
<http://www.waterw.com/~Chief74/Index.html>

John:

I'm not familiar with any BBS door programs with an American Indian theme. We'll print your letter and hope one of our readers can be of more assistance.

Jack Rickard



YOUR REPLY TO "BROTHER DANIEL" OF UNIVERSAL LIFE CHURCH

Jack,

I would like to express whole-hearted concurrence with your reply to "Brother Daniel" in the November issue of *_Boardwatch_* (although I might use less earthy language to express myself). It's really refreshing to see an honest editorial comment with guts enough to flout the current standards of "political correctness."

Although you do not explicitly say so, I suspect it has occurred to you that our society is in the mess it's in because it has denied the existence of absolute moral values. Nations that were originally based on values in the Judaeo-Christian tradition are throwing off the "shackles" of this heritage to find themselves morally bankrupt. Thus the thieves, murderers, and rapists in our society are deemed in greater need of "sensitive treatment" and "protection" than the ordinary law-abiding citizen. (In my own city of Abbotsford, British Columbia, a thief who attempted to break into a mall through the skylight fell and broke his leg. He then sued the mall for his injury and won a financial judgment against the mall. Most of us can probably think of many other instances of laws and judgments that advantage the criminal among us.)

How can there be honest intellectual debate based on the a priori assumption that there is no absolute right and wrong?

How can there be justice if lawyers are not interested in "right" and "wrong" (which are anachronistic in their view) but only in winning their cases? How can there be justice in a jury-based system if most members of the jury are educated mainly by politically correct media and have nothing more to go on than what "feels right"?

You state that you are not comfortable with "organized denominations and religious rituals." I suspect this is the result of disillusion-

ment with some "organized denomination." Do you not, nevertheless, need to base your religious experience on the evidence that spawned these denominations or be left in the same state of moral relativism as those whose stance you deplore?

I am a Christian and I feel that the Creator of this world has been more effectively misrepresented by those who go by His name than by any other means. But I also believe that he has left a means by which we can get to know him if we sincerely wish it. (And he'll meet us more than half-way.)

Biblical Christianity gets its reason for being and its authority from the Bible - a written book which can be objectively examined. Interpretations, of course, may be quite subjective, but they can be honestly debated by those who agree on the authority of the written word. (On the other hand, those professed Christians who relegate the Bible to the realm of religious myth sink in the morass of moral relativism just like their less-professing neighbors.)

Thanks for a great mag which encourages true freedom of expression and is a great bargain. The table of contents reeks a bit of male dominance, but I do note one female contributor—hey, that's a start! (I am female.)

Inge Anderson
inge@uniserve.com



Ms. Anderson:

Perhaps I do need to base religious experience on the evidence, but in most cases I find the trappings and add-ons a little unattractive. But I agree the relativism extant today leads rather inevitably to a kind of downward intellectual spiral with a mass of terribly confused and unhappy people at the bottom - most of my point regarding the good brother.

The latest indication of idiocy run wild - a tree in the park in Boulder Colorado. Traditionally, people hang various ornaments on this tree in celebration of Christmas. Last night, we had a lengthy report on the local news about the ACLU demand that all angels be removed from the tree to ensure separation of Church and State. The inmates have taken over the asylum and I'm losing hope that it can be reversed. There is nothing too trivial, and nothing too outrageous. And I understand this morning Newt Gingrich is under attack for teaching a community college course. Most of the debates ongoing in this country have moved so far out of the realm of the rational that I can no longer cogently participate.

As to the table of contents, I guess we're just a bunch of male dominated kind of guys. We do occasionally have a female columnist, and if what they write is interesting, it sticks. The online scene has been overwhelmingly male dominated, most of the participants are male, and most of our readership is male. It's not anyone's fault and I've never heard of any con-

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spiracy or even desire for it to be mainly a male province from anyone anywhere. Quite the contrary. There have been conscious efforts to include the female gender online for reasons I don't find wholly attractive, but I've never heard of any efforts to exclude them at all. There HAVE been a few systems catering to women that DO specifically exclude males interestingly enough. The assumption seems to be that since it is mostly men, there must be some male conspiracy causing it to be so. There isn't, and the presumption is so simple minded that I rarely respond to it. We welcome women online, and in Boardwatch. But we will never make any proactive effort to include token women in the "interests of diversity." If they are here, it will be because they can write and have something to say. And if they aren't, it's because they can't and didn't or we didn't know about them.

Jack Rickard

AOL COLUMN

I'm writing as a happy subscriber to ask about the continued absence of an AOL column on your pages. I know there used to be one, but it disappeared, never to be replaced. Especially with the table on page 65 of the December issue which gives AOL a full 19 times the membership of MSN (which does rate a column), this absence really surprises me.

Given the professionalism of your publication, I'm sure this isn't an alt.aol-sucks style grudge. But I am curious as to what it actually is.

Thanks for your time,
Dave Slifka
david@interport.net

David:

We carried a number of different online service columns covering Prodigy, CompuServe, AOL, as well as MSN. I found them consistently uninteresting, despite being rather well written. Currently, I think we're going to have one BIG BOARDS column to round them all up, and let it go at that. MSN is kind of new and we're watching it a bit, but it will probably go away as well. I would look for more focus on Internet Service Providers, developing your own web site, and other client/server solutions for both direct dial and net-connected applications in the future. And I still think the direct dial BBS has a little life left in it as well. We'll probably be operating from a Windows95 and Windows NT bias to some degree. ISDN should be covered pretty strongly over the next year.

But, let me ask you. Why, in your estimation, does an alt.aol-sucks newsgroup exist?

Jack Rickard

Boardwatch Magazine: Guide to Electronic Bulletin Boards and The Internet. Maybe a better name would be Boardwatch Magazine: Guide to Internet Bulletin Boards.

Maybe you can point me in the right direction - where's a SysOp/User to go for news nowadays? There are tons of BBS' out there. I'd love news on the latest games, files, and happenings in the BBS world. There's more to the on-line world than the Internet. Maybe it's time to ask your six employees who are not on the Internet what they're up to and let them write an issue for once (42% of your own employees don't even have anything to do with the Internet, according to your Dec 95 editorial). Flip through your Dec 95 issue and glance at the article titles. You're Internet Watch, not Boardwatch.

It's evident you're behind BBS' _with_ Internet access. So why are 95% of my board users downloading files and playing door games and could care less if I ever get my Internet e-mail problems straightened out, much less wanting me to provide them with any other type of Internet account (yes, I've asked!)? I'm trying to bring my users what they want (not what Jack Rickard says is the wave of the future, sorry Jack, but you aren't paying me). Sure, times are changing, and BBS' with Internet access is great. But I must have missed the BBS news because all I see is Internet news. What magazine is going to give me BOARD news?

Dianne.Olsen@GEnie.com
Co-SysOp/Co-Owner
The Launch Pad BBS, (805) 734-3878
Vandenberg AFB, CA

Dianne:

I don't know.

As for our tagline, , I'm rather picturing "Guide to the Internet, World Wide Web, and BBS." Would that make you happier? Let it be so.

Jack Rickard

WEB SITE REVIEWS

The Web is getting to vast these days I am just glad that you guys put it in order for people like me. I love your site reviews. It helps me plan my surfing sessions. But now I would like to give you a site to perhaps add to your Magazine. It is a Web Page all about Jim Carrey the hilarious actor. The URL is <http://www.en.com/users/bbulson/jim.html>. I have been working on this page for a long time and it gets about 6000 hits a month. Could you review it in your magazine or just take a look at it.

Thanks.
bbulson@en.com

Alllllllrighty then. We'll do that. Carrey is indeed a hoot. And I have a weakness for special topic systems, which the web seems to foster to a greater degree than direct dial systems.

Most magazines of this genre are doing web reviews to assist your surfing efforts. We rather approach it from a slightly different angle. Our two hot buttons are information

resources, and web site technique. For example, it is true you could do quite a bit of surfing through Chris Babb's Webcam roundup in the January 1996 issue. But our point is what web sites are doing with web cams, why they do it, what it brings to both the web site and the surfer, and in the case of Michael Erwin's contribution, technically how to put up one of your own. Much of our readership, like yourself, either operates a web site or at least toys with the idea on a pretty serious basis. Many operate other kinds of online services, and view this as a related area.

But yes, the pros like to surf a bit now and again too.

Jack Rickard

WIN95 INTERNET SETUP

Jack:

I must echo the sentiments of many others; you DO have a fine magazine!

Timely, too! I was just wondering how I should go about setting up the WIN95 internet components when I bought the November, 1995 issue. To my delight, my eye took in the CONNECTED banner on the cover and I immediately turned to the accompanying article. Three hours later, everything was working fine and I was out browsing the WWW. Outstanding!

The only reason it took so long is that I had to send a message to my Internet Provider, and wait for his response, to get the necessary address information.

You mentioned that you couldn't find a convenient way to include a signature in a message. The most convenient way that I could devise was to compose my signature in NOTEPAD and then save it to the DESKTOP (name it SIGNATURE).

To use it first position the cursor to the proper point. Next, select INSERT from the message compose screen, then select FILE. This leads to an "insert" screen which usually displays the DESKTOP objects (if not you'll have to work your way back to it); go to the lower left corner and click on "Insert as text only" then double click on the file SIGNATURE.

This takes three mouse clicks and a double-click; not exceptionally convenient, but it works.

I hope you and your family have an enjoyable Thanksgiving Holiday!

Jim McQueeney
jajom@aloha.com

Thanks for the tip Jim. Actually we found a free add-on for Microsoft Exchange written by Ben Goetter of Angry GreyCat Designs that admirably fills the bill. It's titled **Internet Idioms** and is available from <http://www.halcyon.com/goetter/widgets.htm>.

Jack Rickard

THE INTERNET

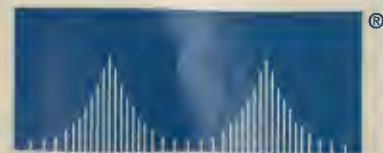


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REPLY TO NEWT - OLD IDEAS - NEW, TRANSPARENT WRAPPING

Most of us share Newt Gingrich's optimism for the Internet's potential for education and government participation by individuals (Boardwatch - December, 1995, "Discovering A National Dialog: The Promise of Cyberspace.") He correctly says the potential of the Internet is available "to anyone with a computer." But, in the context of computers in schools, he cautions "that presents us with another challenge... the need for school choice... so that parents (can) insure that their children are attending institutions that will provide them with the (computer) skills." He obviously doesn't believe ALL schools should or will have computers. His implied options for parents with kids in schools with no computers are to move or switch schools. Does he seriously believe these options are without costs to someone? Of course not.

He doesn't dare compare the costs of moving or changing schools vs. statewide or nationwide programs to put computers in ALL schools because this would involve the dreaded "I" word. Newt's advocacy is clearly for "computers for those who can afford them." This is not a new option. So much for participation by all.

He grandly declares on the one hand "we...are better off when government gets out of the way." On the other, he promises "many of us in Washington are working to open a new dialog with America about where we are as a nation, where we are going and how we are going to get there." As usual, Newt condemns "government" in one breath and promises solutions from "Washington" in the next. We expect our elected officials to occasionally present old, self-serving ideas in new rhetorical wrapping. Newt's new wrapping, in the cases of "computers in the schools" and "getting government off our backs" is, as usual, totally transparent. My guess is he's hoping we are either blind or simply won't look.

Jerry Thompson
Edmonds, Washington

Jerry:

I didn't read it that way. But the alternative to "computers for those who can afford them" would be what? Computers for everyone, whether they want them or not, funded by my tax dollars, whether I want them or not? Socialized computing? Well, it's over. It didn't work. Give it up.

That is actually MY point of view. Gingrich has been fairly consistent in advocating "laptops for the poor" and indeed has proposed tax credits and the like to fund them. I don't personally agree. You apparently do, but don't think Newt does?

I'm confused, and would offer the observation that this makes at least two of us.

Jack Rickard

ISPS IN OTHER COUNTRIES

Hi jack !

I'm an exchange student living in Ft. Wayne, IN. One of the first things I did when I arrived was to subscribe to Boardwatch, since I had only read it in Italy over the Internet. In your last "Letters to the Editor" you talked about ISPs in Germany, and you said that in Europe it is often very hard to become a service provider, with "more restrictive regulations and more centralized telephone oligarchies". One notable exception to this is Agora Telematica, in Rome, Italy (<http://www.agora.stm.it>). They have literally fought against the Italian telephone system, to provide their users with a cheap and easy Internet access. They cost just over 130 \$ a year, flat fee, for an unlimited SLIP connection, while others in the country charging many times that. Just like it seems Karl Langner is doing, others are succeeding as well.

BTW, your Magazine is one of the several I have subscribed to, and clearly it is the most informative, especially for my goal of starting a bbs in Italy, where the activation cost per line is 125 \$, with a monthly charge of 10 \$ a month, and a per-minute charge for using the phone. I clearly will need some cash, but I am working on it... Your magazine has provided me with many ideas and inspirations, especially Doug Shaker's Column, who has brought me far enough to want to start a bbs with TSX.

Thanks to all of you !

Jan Miczaika
jncz19@serv2.fwi.com
Fort Wayne, IN

Jan:

The world changes - sometimes in interesting ways. See Shaker's latest in the December and January issues. In any event, we're very pleased that affordable connectivity is being extended in many areas of the world such as Germany, the Netherlands, and Italy. Unfortunately, many others still struggle with draconian telephone systems and limited infrastructure. In our enthusiasm for a global Internet, we sometimes forget a minor detail - it isn't built yet. It's still mostly in our heads.

Jack Rickard



MIGHTY MORPHIN B'WATCH MAG.

Dear Jack:

I've been thinking more about why I get B'watch Mag and have concluded that it's because I'm simply interested in what Jack Rickard, Bill Reefer, and Phil Becker (when he gets press) and others think. But mostly Jack. Every month, I get nearly 20 screed sheets coming across my desk. Most come free and most of this is usually in rapid egress to the recycle /dev/null. And just about all talk about roughly the same things

in the Dec95 B'watch (Java, Web phones, Newt, sex, asymmetric encryption, and the Blackbird Empire of Micro\$oft). However, I've been noticing though how the B'watch title has been morphing over the last years something like..

1993: Boardwatch Magazine; Guide to BBS's

1994: Boardwatch Magazine; Guide to BBS's and the Internet

1995: Boardwatch Magazine; Guide to the Internet and BBS

Dec95: Boardwatch Magazine; Guide to the Internet, World Wide Web and BBS

So as you chuck BBS from masthead I'd like to make a few suggestions for '96+ (liberally applying Moore's Law)

Jun96: Webwatch Magazine; Guide to Object Oriented Webs and Natural Language Artificial Agents

Dec96: Netwatch Magazine; Guide to Global Neural Networks and Remote Visualization

May97: Jackwatch Magazine; Hang out in Rickard's body via Neural Jack

For the last title, you'll have to fire your staff, hire Steve Mann from the Media Lab <<http://www-white.media.mit.edu/~steve/netcam.html>> who will likely be able to insert a silver disk into your spinal column and there you be amigo!... For all of us to enjoy! Mann will give you an on/off for your surgically embedded Cisco router but I think you should really put it to a vote by your readers..

best..

Ted Okada
ted@cais.com
Food For The Hungry
<http://www.fh.org>

Ted:

I avoid unnecessary medical procedures and in some cases necessary ones. Couldn't we simulate a Cisco in software and perhaps the actual link via infrared or some form of audio? Or could we just have them call and I'll wave my arms and talk?

It all depends on your point of view. In putting together our 100th issue in September 1995, I happened across the first issue of Boardwatch in March 1987. I've had a picture of us coming a long way. After rereading that first issue, I was depressed for two days. I could drop half the articles from that issue into this one, and you wouldn't be able to tell. The more things change, the more they stay the same.

Jack Rickard



'SEXISM', BOARDWATCH DEC 95

jack rickard:

I recently received a complementary December 95 issue of BoardWatch magazine

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to review and perhaps subscribe. In most cases, I'm sure this a successful marketing strategy to acquire new readers.

While scanning the letters to the editor, I was disappointed to see your scathing reply to a letter from a research professional from Health Canada, Halifax, Nova Scotia. Instead of considering her criticism of the use of terms, and the overall tone of a previous article as a signal that your audience may be larger and more diverse than you realized, you choose to alienate an exponentially increasing portion of BoardWatch magazine's potential customer base. Your assumption that Ms Murray's concerns are only shared by "a pretty small universe of one" couldn't be more wrong.

By the time I reached the article "written exclusively for BoardWatch magazine" by Newt Gingrich, another sampling of spittle from the fleshy, white, misogynist community, I couldn't get this magazine into the circular file quickly enough.

mwithrow@clark.net

And frankly, we're pleased to have it there. Ok. A pretty small universe of two. I never thought of myself as sexist through nearly 40 years of life. But recent events have pretty much convinced me that if I'm not, I need to be in a hurry. You FemiNazis literally will not rest until all fleshy white misogynists are eliminated from the planet. Your bitter, mis-directed and socially craven agenda is destructive to all it touches, including yourselves. You may prevail, but not with my approval or participation.

Jack Rickard



Hello Jack,

I've been reading Boardwatch for years, been planning to write for almost as long.

First, compliments shouldn't go unspoken, so thank you for the fine publication that you put out. I find it indispensable as more than any other magazine, I find you and BoardWatch to be "ahead of the curve" in knowing where we are going in the online world.

I also wanted to comment and affirm something that you have told others many times over the years in these pages, when they have written you for advice on starting a BBS or online service, and that is the importance of having your own vision of what you want to do, and finding your own niche. I started my system seven years ago, on an 8088 with two 3.5" floppy drives and NO hard drive, as an online meeting place for those interested in the sport and hobby of precision adult airguns. From that humble beginning came FidoNet's AIRGUN echo, linking together airgunners throughout North America and the United Kingdom and we have grown to a multiline, multi-platform (PcBoard and RyBBS) system that is the center of an online community of shooters

and gun rights activists throughout the U.S.A., coordinating activities in the north-eastern U.S. for the Paul Revere Network, a nationwide net of some 200 systems promoting and protecting our Right to Keep and Bear Arms.

Finally, about the Internet: I'm well aware of the natural tendency of most people to resist change, sysops being no exception. So, even though I much prefer the world of dial up BBS's, I've tried to go with the flow and I offer Internet access to my callers who desire it. Personally, when I dial into a BBS in some sleepy little fishing village in Alaska, or a professor's tiny system in Slovakia (whose numbers I found in BoardWatch), I actually feel that I've travelled somewhere. Browsing the World Wide Web, I've been left non-plussed and with a decided feeling of "Is that all there is?" I haven't expressed this before and felt I was alone in feeling this way. Well now I feel redeemed! After reading your comments on ONE BBSCON, John Dvorak's column in the following issue, and Alan Bechtold's in a recent issue of SySop News, I now know I am not the only one with this impression! The downside of BBS'ing is the phone bill. The upside of the Internet is the phone bill. Now I know where it's all going. The future is clear, and bright!

Sincerely,

Jim Henry
Airguns for fun
jim@airpower.com
(610) 259-2193

Jim:

I share your passion for special topic services. I think the Internet enables them to operate more on an equal footing with the largest services such as CompuServe, with essentially local access on a global basis.

The personal computing industry has grown from almost invisible groups of hobbyists and enthusiasts in the late 'seventies to literally tens of thousands of businesses and millions of individuals - multiple billions in economic activity and one of the largest employers in our country. The number of new products introduced each day is staggering. Just the press releases about new products are now weighed more than read.

Trying to divine from this cauldron of entrepreneurial and inventive activity what might be important in the future and what will be discarded almost immediately is a ridiculous task to attempt and continuously humbling. We think we do it better than most and over time, many of our readers have determined that Boardwatch gives them a slight edge. Don't inflate that to prophetic accuracy. It's a percentage thing over time. But yes, we landed pretty squarely on the Internet as future early in 1990 and have held to that pretty strongly since. It requires some changes in both operation and thinking, and has caused many a lot of pain as well as gain. The immediate gain is global flat rate communications. You will find other advantages as

well, some that go far beyond that. But there is a learning curve and it is non-trivial.

Jack Rickard



Hi Jack,

First off I really enjoy your magazine and felt it was time to put in my two cents or sense which ever applies.

I wanted to share with you and your readers my experience with bulletin boards and the Internet. I had been looking at starting my own bulletin board for many years and last December decided to take the plunge and attempt to make money at it as well. My plan was a real estate board for the community I live in and after much looking around I decided on Excalibur because of the Windows interface and the promise of database access. After waiting what to me was a long time for the database connection, I wanted to get my business going, I switched to MediaHouse which I found very nice especially the database connection.

Yet they promised Internet connection in 3 weeks (this was back in February of '95) and it took four months. I had just started with the Internet through a shell account didn't know anything about UNIX and was hooked in for something like \$15.00 per month. The UNIX shell and LYNX interface wasn't too appealing and I had heard about the graphical Interface called Netscape. Well I got Netscape and a PPP account and was totally blown away by how cool it was and how much information was available through the web. Compared to LYNX it was like night and day.

Meanwhile I'm still waiting for the Internet connection from MediaHouse and trying to drum up some business with the local real estate offices in town to list properties and such. I became very curious as to how the WEB was served up. Looking around I was quite shocked and pleased to find Bob Denny's WIN-HTTPD 16 bit web server (a port from UNIX I believe). After downloading his server and browsing the directions I had it running on the NET in about 5 minutes under WFWG 3.11. I couldn't believe it, it was so easy. Bob had included some sample scripts for database access via a windows CGI (common gateway interface) and MS Access database put together with Visual Basic 3.0 pro.

Just so happens I had been using MS Access for my BBS. I picked up VB 3.0 pro from the local computer store, got home installed it and started playing with the win-cgi and database example Bod had included. I never programmed a damn thing before. Many months later I've created very thorough CGI scripts with VB and now VB 4.0 pro and people are actually paying me to customize DB access to their web servers.

It was so hard to get people to call my BBS and it took a somewhat experienced user to setup the modem - my users where in the dark ages with 286's and 386's and hooked

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into the local MLS at 1200 baud and they only knew how to look up listings and turn on the computer.

I spent hours doing customer service on how to setup a modem and download software (the BBS client) and setup the software. With the Internet and WEB browser's there's all kinds of customer support from all areas on how to get connected. Surprisingly my stats show many users from AOL, Compuserve, Prodigy, the bigger companies. I get about 100,000 hits per month, no way on the BBS attracting that kind of usage in such short time, which in reality is about 25,000 individuals. As you know a hit can be a simple graphic image. I keep my graphics to a minimum for faster downloading.

After getting my real estate database online with the Internet via win-httpd I was getting HITS left and right by merely posting my address in newsgroups and listing it in the major search engines (eg.. Lycos, Webcrawler, Yahoo, etc). I was only getting a few calls per week on the BBS and I was paying for 5 lines in anticipation of many callers - where the webserver I was only paying for 1 line and could have many individuals access via this 1 line at the same time - too cool.

Well I dropped the BBS and the WEB is kickin' - I've gone from real estate to serving up WEB pages for profit and my VB database scripts make me extra money as well and the email is great. Before DB access was easily accomplished through (only a few months now) third party apps I was getting email from NASA, Italy, Canada and many other places asking how to connect into the database via the WWW. Now I run WIN NT and WEBSITE (Bob's 32 bit WEB server) 24/7 and love it, very easy to administrate once you get the hang of it. If your a Windows user it's real similar. Tried LINUX but can't compare to NT for the learning curve if your a seasoned Windows user.

Now I run a JobLocator appropriately called 'the Internet JobLocator', mostly computer jobs but that's beginning to change as a more varied clientele hook up on the WEB.

Oh well just another day in the life of a netter...

Thanks for the rag again enjoy it very much.

-Brett Tabin
Travelers Online
<http://www.travelersonline.com/>
mtc@gslink.net

That's about how it goes Brett. Your journey is typical and probably necessary. Now you have some familiarity with both worlds and the positives and negatives of each. I'm excited about the web and the Internet in general. I think it is a natural extension of what we've been doing all along. Your travelogue shows why better than I can.

Software for online services is a bit different in that the design follows the philosophy of the author and can vary widely compared to word processors for instance. You tried Excalibur and moved to Media House. Others will emphatically describe starting with Media Host and graduating to Excalibur - or something else entirely. It is a search for a match between your vision of an online service and the capabilities of the software - a situation in which relatively obscure features can make a huge difference to one operator, and none at all to another. This is why we eschew head-to-head comparisons in Boardwatch. They make no sense in this product genre. It sounds like you find webmeistering the way to go.

Jack Rickard

ANY JOE BLOW

After 40 years in this computer game, I have mellowed quite a bit and no longer get excited when I encounter computer "bigots", but rather remember that in my younger days I too engaged in the same type of thing. Somewhere about 25 something years ago, I was publicly recognized by Motorola management as a "Hostile" and it made my day!!! Dan's (root@sasimi.anime.net) recent letter (December 95) about my not knowing "that the keys go toward the ceiling" gave me a chuckle or two (so did your response) about Unix vs. NT or choose your favorite ____ vs. ____.

Please Dan, get yourself out of the computer place for a couple of days, and find your sense of humor again. We (myself and the locals around here who are now on the Net) are having a "grand old time" out here in the cornfield. And by the way Dan, smile when you fly on a plane, drive a car, watch TV, visit your doctor, shop at a store, turn on the lights, use a phone, eat some processed food, or a few other things in your daily life, as you might encounter some of my software and hardware, so be sure to check the orientation of those keyboards ^ _ ^ .

My previous chuckle (before NT Not) was remembering when I was writing the RFB specs for the FAA Air Traffic Control replacement system in 1977. Hey, the gov'nment says they'll actually get the system installed by 1998 or 99.

Tell me, Doctor Jack, am I an ol'fart yet???

BTW, our mail service is getting better.

John O. Foster
johnfoster@softfarm.com

You probably are John, but you're not alone. I picked up my very first pair of reading spectacles at Walgreens this afternoon myself. Some of these religious wars have gone on so long it is easy to forget that they are new and inspiringly evangelical to

some. Long live Linux, NT, Win95, Pick, Picospan, VM, MVS, and 360 Assembler. Cobol will live forever. Fortran Watfive S. Whatever.

Anyway, thanks for the tip on NT a year ago, and I hope your Internet Service Provider activities with NT are successful and fun.

Jack Rickard

How can Jack Richards state that "Windows95...is an entirely new operating system and we think it may comprise the most significant event in the development of personal computers since the introduction of the IBM PC in 1981" (Windows 95-Connected, November issue)?

I mean, let's get real, Macintosh users have had the Win95 capability for several years now. Win95 is certainly nothing revolutionary. Win95 merely brings the rest of the world up to routine standards Mac users have enjoyed for years. Win95 only surpasses the Mac OS in a few insignificant instances and that advantage should be gone by the time Copland is distributed. Just because the masses who use Windows "think" they have something new doesn't make it so. All it does is show massive ignorance.

An article on Win95 for the masses is fine. Just avoid the hyperbole with such ridiculous statements. Finally, since you opened the door Jack, get a Mac!

Vic Conrad
vconrad@vii.com

"I think they are happy with Windows and that's an incredibly depressing thought."
Steve Jobs

Vic:

We had a Mac. It could play a game called Glider that allowed you to fly a paper plane through a house from heating vent to heating vent. Revolutionary. I fell in love with it immediately, and if I could physically locate it, I would probably play with it some more right now.

About a year ago, I predicted the complete demise of Apple computer in 36 months. You're down to 24. Enjoy.

Jack Rickard

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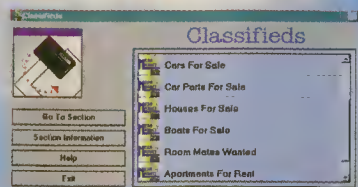
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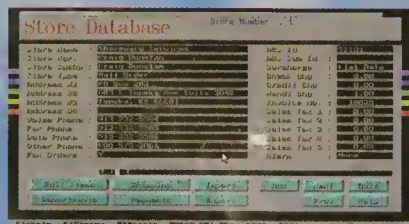
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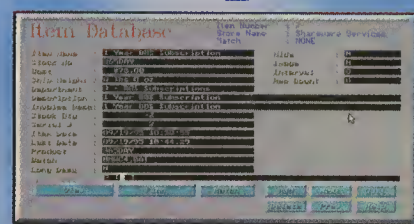
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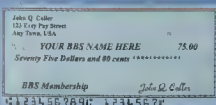
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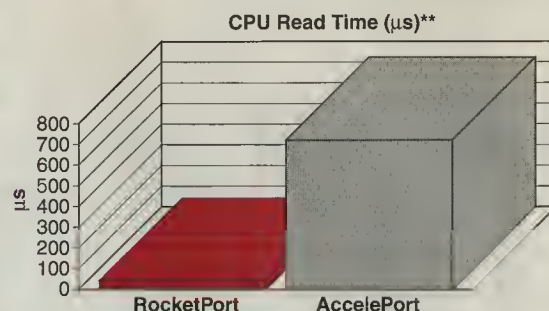
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** Measurement based on driver call times.



Introducing Your Worldgroup™ Solution Providers

At BSI Technologies, we give you the choices that allow you to create a successful online service. Our staff consists of experienced programmers, consultants and system integrators with a diverse background in online network technology. Let us be the support team that brings your system online.

If you're thinking about starting your own online service, consider these two time saving options: enrolling in BSI's training seminars to help you learn the ins and outs quickly or having BSI run your system on our Service Bureau. Let our experienced technicians handle all the technical details, and free you to do what you do best - run your business! And we also offer World Wide Web options, as a stand alone service or with our Service Bureau. Take the BSI ramp onto the Information Superhighway!



Training Classes:

We offer a complete line of training seminars for the system operator. From novice computer users to experts, our courses offer all the information you need to get your new online service up and running fast --- or to learn the "tricks of the trade" for optimizing your existing system.

These seminars are available at our educational facilities in South Florida, or they can be delivered on-site and customized to your specific audience.

Introductory- Two days for the novice sysop introducing you to: Menu Tree, Forums, File Libraries, Security, Polls & Questionnaires, Configuration Decisions, Auto RIP Menus and BBSDRAW.

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For those who don't have the time or technical skills necessary to run their own online service, using our service bureau can be a cost effective alternative. We take care of the details, such as daily backups, off site storage, a disaster recovery plan, and a technical support help desk for your callers, so that you can concentrate on promoting your system.

Whether you're an information provider or a customer service center, offering technical databases or catalog sales, BSI's Service Bureau can work for you. We offer X.25, Internet, World Wide Web and telephone dial-up lines for maximum exposure. There's no need to worry about how your users will connect. Flexible billing options allow you to offer it all.

World Wide Web Services:

The Internet is growing at a phenomenal rate, and everyone wants to be a part of it. To make it happen you need lots of hardware, special phone lines, software and expertise. BSI's Web Service handles all this for you. We've invested in state-of-the-art, redundant Windows NT and Novell servers, a full T-1 and the latest Web Server software. Take advantage of the opportunity to have your business on the World Wide Web.

Galacticomm has lowered prices on Worldgroup, and BSI is passing the savings on to you! Check out these new, super low prices!

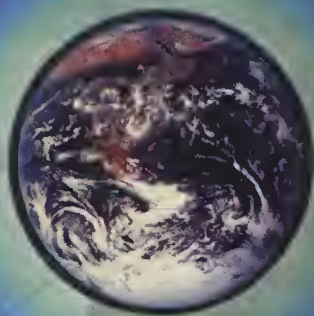
Worldgroup 8-User:	\$475
User Six-Packs:	\$185
Client Server Dev. Kit:	\$315
X.25 Software Option:	\$795
Extended C Source Kit:	\$395



Technologies

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TELEBITS



IRMA FOR INTERNET

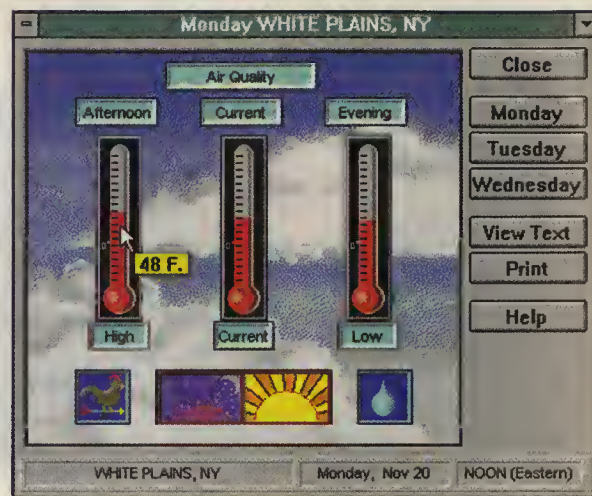
Attachmate Corp.'s IRMA for Internet is a suite of Windows applications for business users. Included are a Winsock-compliant TCP/IP stack, LAN and dial-up connectivity tools, an e-mail program and Netscape Navigator browser. Dial-up connectivity supports PPP, SLIP CSLIP and ISDN. The suite lists for **\$85**. Attachmate Corp.: 3617 131st Ave S.E., Bellevue, WA 98006 . (206)644-4010 or (800)426-6283 voice; (206)747-9924 fax or <http://www.attachmate.com>

CABLE TV INTERNET PACKAGE

FTP Software and LANcity Corp. combine to offer an Internet access product for cable TV subscribers. The package includes FTP Software's Explore 2.0 for Windows software suite and LANcity's Personal Cable TV modem, to deliver access speed of up to 1 Mbps as cable TV companies make service available. Last month, cable giant Tele-Communications Inc. began offering the FTP Software/LANcity product to subscribers in East Lansing, Michigan. Rapid deployment of cable modems is expected throughout the industry; Motorol Inc. just sold 350,000 cable modems to three cable TV giants (including TCI) for a rumored **\$175 million**. FTP Software Inc.: Two High Street, North Andover, MA, USA 01845. (508) 685-4000 voice; (508) 794-4488 fax; <mailto:info@ftp.com> or <http://www.ftp.com>

OFFLINE USENET & PRODIGY NAVIGATORS

Dvorak Development & Publishing Corp. (no relation to John C.), developers of the popular NavCIS for Compuserve offline mail and destination manager, have announced two new products designed to save Internet users connect time and charges. **OUI**, the Offline Usenet Interface (**\$39**), supports uuencode and MIME, e-mail, Rot-13, automatic "part finding" for those split messages, twit filtration, and task agents that search for key words or phrases. **NavStar** (**\$69**) is an offline frontend for Prodigy, similar to NavCIS but including features such as graphi-



cal weather maps and BB message threading, and the ability to use different fonts in messages. Free copies of both programs can be downloaded from <http://www.dvorak.com> for 30-day evaluations. Dvorak Development & Publishing Corp.: 385 So. Pierce Ave., Louisville CO 80027. (303)661-0345 voice; (303)661-0635 fax; CompuServe: GO DVORAK.

INTERBUZ ENCRYPTS & ENCODES FILES

Interbuz Software encrypts any file and converts it to printable ASCII characters for easy transfer via Internet e-mail or any other medium. The software includes a "time-bomb" feature that causes the file to erase itself if it is not decrypted by its addressee within a preset period. Other features include allowances for multiple recipients and a list of remote stations maintained by the Interbuz INI file. Since each remote recipient has a different key, they can only read messages intended for them. **\$95** for a single copy or **\$35** for multiple copies. Live Data Systems Inc.: P. O. Box 13144, Research Triangle Park NC 27709. (919)544-7219 or (800)252-3102



voice; mail to: livedata@mercury.interpath.com or
<http://www.sagrelto.com/entrexch/livedata.htm>

AIMS - TURNKEY INTERNET MANAGEMENT SYSTEM

Aimnet Corp., a California ISP and software developer, has released a cross-platform system specifically designed for managing an Internet access and service business. The Aimnet Internet Management System (AIMS) includes modules for billing, sales, customer service, trouble ticketing, POP management and inventory control. Prices were unavailable at press time. Client software is available for UNIX, Windows or Macintosh. Aimnet: 2350 Mission College Blvd., Ste. 600 Santa Clara CA 95054. (408)567-3800 voice; <http://www.aimnet.com>

INTERNET ROUNDTABLE SOCIETY CHAT SYSTEM



The Internet Roundtable Society is an Internet service bureau whose clients include HP, Eastman Kodak, NASA and VISA. Its **WebChat Broadcasting System** (WBS) claims to be taking 19 million hits a month, sporting over 100 channels. A free one-channel version of WebChat can be downloaded from <http://www.irsociety.com> and the commercial version starts at \$8,000 for a 200-channel license with one year of free technical support. Internet Roundtable Society: (415)327-4386 voice; (415)327-4594 fax; <mailto:wbs@irsociety.com>

BUSINESS CONSUMER GUIDE WEB SITE

Vendors erect Web sites to sell their products; the information on such sites may not tell the whole story. **Business Consumer Guide** magazine does, and now you can get name brand recommendations, real world prices, complete comparison tables, easy to understand explanations, negotiating strategies, buying tips, and much more from the magazine's <http://www.buysmart.com> web site. Other resources include vendor directories, links to other buyers guides and a "terms of trade" glossary. BCG is supported entirely by subscriptions, which cost \$25 per issue or \$159 per year. Beacon Research Group, Inc.: 125 Walnut Street, Watertown, MA 02172. (800) 938-0088 voice; (617) 924-0055 fax.

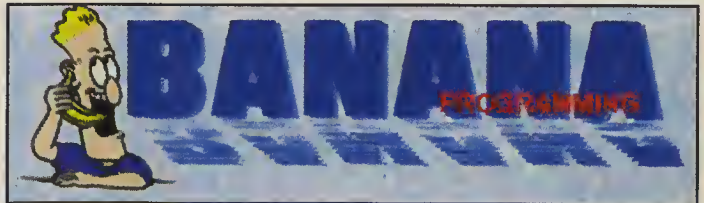
COMTROL DELIVERS ROCKETPORT PCI

Comtrol Corp. launched a PCI bus version of its RocketPort multiport serial board at Comdex. It provides a 32-bit access path on Pentium-based machines, supporting up to 128 ports at 230.4 Kbps full-duplex. The company claims that the RocketPort is "the only available controller capable of sustaining ISDN Terminal Adapters at bonded or compressed speeds." Performance is assured by use of ASIC chips that dedicate one 36Mhz processor to every eight ports. The PCI version currently supports NetWare, Windows 95 and NT and Workgroups. Price have not yet been determined. Comtrol Corp.: 2675 Patton Road, St. Paul MN 55113. (800) 926-6876 or (612) 631-7654 voice; (612) 631-8117 fax; (612) 631-8310 BBS; <http://comtrol.com>

3COM MAKES ISDN EASY

Ordering ISDN from one's telco can cause ulcers. So 3Com is taking the pain away by offering tollfree service that makes it as easy as buying a subscription to **Boardwatch**. Customers who purchase 3Com Impact ISDN products can call (800)NET-3COM to have someone else deal with ordering, provisioning and qualifying their ISDN service. The Impact product line is now available through all Fry's electronics stores. 3Com Access Products: (908)888-4570 voice; (908)888-4456 fax; <http://www.3com.com>

BABY BANANA

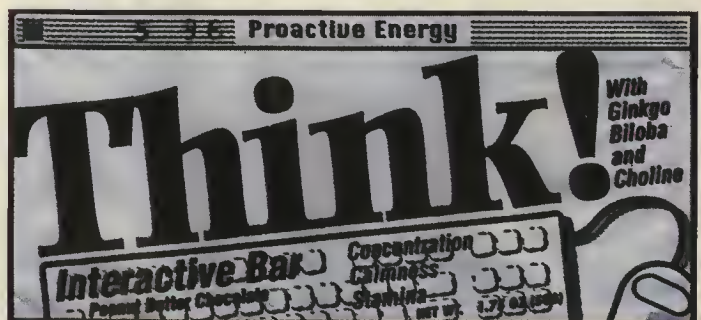


Banana Programming has released a do-it-yourself version of its BananaCom Custom package. Identical in its terminal program functions to its \$275 big brother, the \$69 Baby Banana omits the probably unnecessary customized documentation, ANSI screens and other window dressing. Instead, the sysop just enters the BBS' name and phone number in the master copy's dialing directory, then distributes this "customized" package to potential customers. Banana Programming: 1916 Brooks, Ste. 205, Missoula MT 59801. (406)543-1928 voice; (406)549-3522 fax; (406)543-8234 BBS; <http://www.split.com>

NOMAD RELEASES WEBDBC 2.0

Nomad Development Corp. is shipping WebDBC version 2.0, their gateway between World Wide Web Servers and SQL databases. It allows easy creation of interactive online services such as classified ad and catalog shopping systems, threaded discussion groups and complex questionnaires without writing a single line of code. The product is priced from \$295 to \$895 and supports Windows 95 or NT, UNIX and MacOS. An evaluation version can be downloaded from <http://web.ndev.com>. Nomad Development Corp.: 81 Vine Street, Ste. 203 Seattle WA 98121. (206)448-1956 voice; (206)448-1761 fax; <mailto:info@ndev.com>

THINK! INTERACTIVE ENERGY BAR



When you're bleary-eyed and brain-dead from too much Web surfing, IRC or newsgrouping (sic), scarf down a **Think!** bar and rejoin the sentient. Touted as "the only interactive bar on the market," the chewy peanut butter and chocolate confec-

tion includes *choline* which "improves cognitive performance;" *ginkgo bilboa*, "a brain function food" that "increases blood flow to the brain;" *phenylalanine*, an amino acid supposedly good for one's brain, and *Siberian ginseng*, the "wonder drug of the Orient, said to increase endurance and prolong health." For best results, it should be eaten "one hour before heavy brain use is required." Naturally, Think! will be sold over the Internet as well as in stores. We tried one; it tasted like something Mom said was good for us. We're still making magazine, so apparently it didn't enhance our brain functions much. Personal Health Development: P. O. Box 234, Ventura CA 93002. (805)644-8596 voice.

FISH FOR YOUR THINK TANK



Tired of preprogrammed pixelated piscine screen savers? Even the sharks and rays applet in Windows 95 gets dull after a while. But there's something soothing about a tankful of real fish, and every computer user needs soothing. WaterWare is a 55-gallon acrylic aquarium designed to wrap around one's computer monitor, top and sides, providing at least peripheral glimpses of tranquility. Two models are available to accommodate a desktop monitor or the monitor-on-CPU configuration. Tank hood, light fixture, filter system with pump, charcoal, foam sponge and "Bio Balls" are standard equipment; fish are your problem. A variety of back wall decors, tank hood and filter colors are available. Retail prices range from \$825 to \$1,300. Larger models (up to 1,000 gallons) are available for big-screen TVs stereos and even cash registers. Crystal Clear Sound Company: 9018 Jeff Street, Bellflower CA 90706. (310)529-3969 voice; (310)529-2202 fax.

ESOFT LAUNCHES SEVERAL PROGRAMS

The Internet Protocol Adapter (IPAD) has been enhanced to support the industry's first "user-contextual" firewall. It allows IPAD operators to configure packet filter firewalls on a user-by-user or group-by-group basis, in addition to conventional network-wide filtering. Both inbound and outbound accessibility of resources can be controlled depending on which user accesses the system. "Nobody else can offer this," said president Phil Becker.

The company also introduced a business leasing program that provides one-stop affordable financing for all the startup costs of an ISP business. Even Terminal adapters can be loaded

onto a lease, allowing startup of a complete Internet presence for a hardware cost of less than \$250 per month.

Leased-line Internet access is also part of eSoft's "Total Internet Solution" program. A series of educational articles for new service and content providers about the details of Internet connectivity, written by Becker and Marketing Director Alan Bryant, is available on the company's web site. ESoft Inc.: 15200 E. Girard Ave., Ste. 3000, Aurora CO 80014. (303)699-6565 voice; <http://www.esoft.com>

UUNET UNVEILS NETWORK LAN INTERNET

Internet 9-5 offers small offices in large or small companies everything they need to provide NetWare users with complete and secure Internet access, including affordable connectivity services. The package includes Performance Technology's Instant Internet™ LAN-to-Internet hardware/software package; client software for e-mail, Web browsing, ftp and newsgroup access; UUNET's high-speed dial-up connectivity; domain name registration; up to 20 e-mail accounts and five simultaneous newsgroup connections. All hardware and software is shipped preconfigured, allowing customers to be up and running "in under an hour." Startup price is \$3,495 with a 28.8 Kbps modem or \$4,195 for ISDN gear. UUNET Technologies: 3060 Williams Drive, Fairfax, Virginia 22031. (800)488 6383 or (703) 206 5600 voice; (703)206-5601 fax; <mailto:info@uu.net> or <http://www.uu.net>

POWERBOARD FIRST TO SUPPORT WIP

NuIQ Software's Powerboard BBS system is the first BBS platform to incorporate Durand Communications Network's Windows Interface Protocol (WIP). WIP, a freely available graphical standard for Windows menuing and communications software, has long been the underpinning of Durand's Mindwire and DC Genesys products. Now Durand is actively working with other developers to propagate the WIP standard.

Powerboard BBS users will now have a graphical interface using the DCTerm communications program, also freely distributed. With an optional addon module from Durand, DCTerm can be used to access WIP systems over the Internet. WIP features include Windows icons, full-color graphics, scrolling fields and sound support. All this from a DOS-based BBS package (Powerboard). WIP menus can be created automatically by the WIP Menu Developer.

Durand Communications Networks Inc.: 147 Castilian Drive, Santa Barbara CA 93117. (805)961-8700 voice; <http://www.durand.com>. **NuIQ Software Inc.:** 415-A Richbell Road, Larchmont NY 10538. (914)833-3479 voice; (914)833-3623 fax; (914)833-1479 BBS; <http://www.nuiq.com> ♦

APDI – The Nation's Largest Service Bureau

With over 500 simultaneous connect lines (and growing fast!) APDI is the nation's premier Service Bureau providing customized on-line systems for corporate and professional organizations nationwide.

APDI will work with you to design your on-line system and then implement and operate it at our state-of-the-art Service Center located just outside of Washington, D.C. We provide all hardware, software and communication facilities required to make your system a success. We also provide a professional Help Desk to assist your users in connecting. You are free to concentrate on the data, APDI takes care of all technical details!

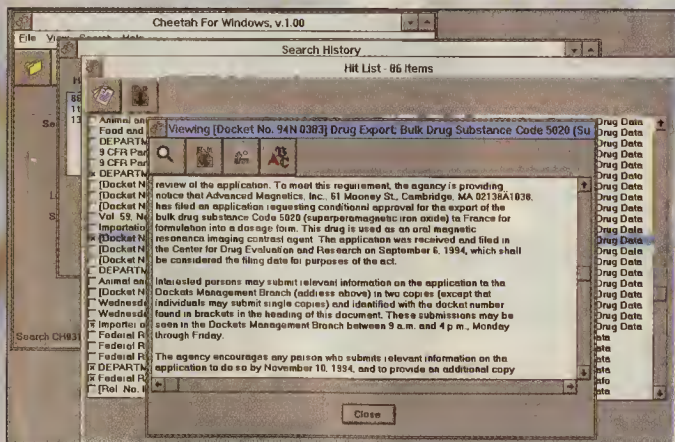
Your Choices

APDI offers you a wide range of options for your on-line system including:

- **User Interface:** MS Windows Client, RIP, ANSI, Terminal
- **Connect Method:** Toll Call, 800 Number, Local Call Nationwide, ISDN
- **Internet Access:** Telnet, World Wide Web, E-Mail
- **System Design:** Customized to present your unique image

On-Line Applications

APDI has implemented systems for some of the nation's largest organizations. We have developed service bureau applications for **publishing, associations, university courses, customer support, software distribution, CD-ROM order processing**, and more! If your project doesn't fit a standard application, we can develop a custom on-line system to fit your needs.



Screen shot from APDI's new Cheetah for Worldgroup Product

APDI's Cheetah product is the on-line industry's fastest and most powerful full text search and retrieval program. Search one or multiple databases using Boolean and proximity search phrases. Megabytes of data can be searched in fractions of seconds. You can take advantage of Cheetah on your system running at APDI's Service Center or you can buy the package to run on your in-house system. Cheetah is compatible with virtually all popular BBS programs including a new version for Galaticomm's Worldgroup!



President Mark Burnett in one of APDI's Computer Rooms

What Makes APDI Number One?

Our State-of-the-Art Service Center and Secure Environment

- USRobotics 33.6Kbps modems on all phone lines
- ISDN, Packet Switching, Frame Relay
- Fully redundant hardware systems
- Independent backup power facility
- Automated data backups daily
- Complete virus scanning
- 7 by 24 system monitoring
- Continuous technology refreshment

Our User Support

- Professionally staffed Help Desk for your users from 9 a.m. to 12 midnight EST

Our Customers and Alliances

Some of the largest and most progressive corporations, associations and even major online services have selected APDI to implement and operate on-line systems for them. Additionally, many manufacturers and service providers have chosen APDI as a business partner. Among these are:

- Galaticomm, Inc. • Mustang Software, Inc. • CompuServe Network Systems

Our Reputation and Demand for Excellence

...having worked with APDI in setting up the PTO's on-line information system we continue to be impressed with their high quality of service and professionalism.

Jim Moriarty, United States Patent and Trademark Office

...we are very impressed with APDI's excellent support and operation of mission critical Worldgroup based on-line systems.

Scott Brinker, President, Galaticomm, Inc.

...CompuServe is excited about the benefits that APDI can bring to our existing and future client base.

Jeff Kiely, CompuServe Network Systems



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TECHNOLOGY FRONT by Jim Thompson Western News Service

THE QUIET CLIENT/SERVER: EXCALIBUR BBS

Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677, MCI Mail: 321-4127, mailto: jim.thompson@wnsnews.com

It was nearly two years ago that I got a tip from someone over the Internet to take a look at a new BBS package called **Excalibur**. The person writing the message began by berating me for ignoring this excellent package. He went on to say that it is the best graphical BBS available and superior even to the major commercial services such as CompuServe and American Online.

After getting that note, I remembered having seen a short mention of the product in another computer magazine. I was interested but decided to put off any close look until the product was out of beta. I like to see "bug free" products that are already in use. As a reviewer, it is difficult to write about a product that is not yet finished. While they all contain a great deal of promise, there is often no way to be sure when, and even if, these promises will be fulfilled.

"One of the most complete client/server BBS packages I have seen."

After all this time, Excalibur Communications, Inc., has still not released the final version of the product. This is not to say that it is not a fully functional program. Indeed, it is one of the most complete client/server BBS packages I have seen in a long time. It is also becoming one of the most popular. Despite its status as a "beta" product, more than 8,000 systems are already in operation in the U.S. and overseas. Despite this, the powers at Excalibur Communications, Inc. are still honing the product to what they hope will be perfection.

According to Eric Weber, President of Excalibur Communications, Inc., "The customer response has been wonderful. Since the first beta release in July of 1993, we have polled our users and asked if they want us to release version one or wait for more features. Most opted for more features." Weber also notes that they started with a blank screen so they had to, "write screen design programs, terminals and hosts all of which takes time."

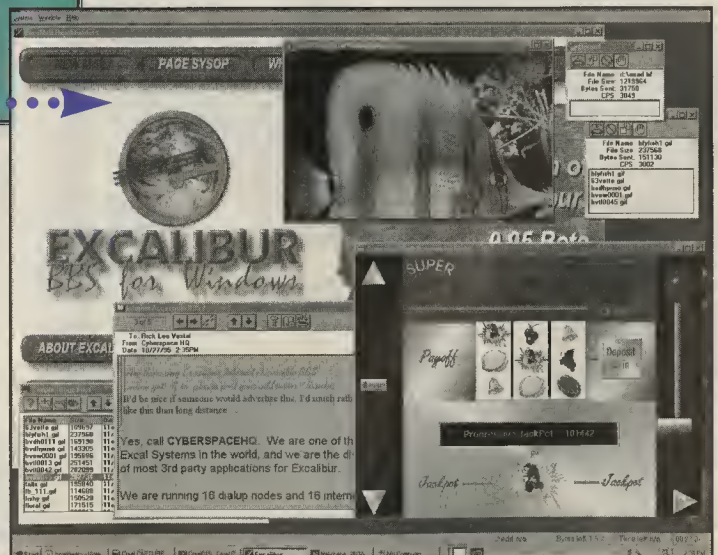
The BBS runs under Windows 3.1, Windows 3.11 and Windows NT, but Excalibur Communications recommends Windows95 as the platform of choice even though Excalibur is a 16-bit application. The

reason for this, according to Weber, is that Windows95 has cleaned up most of the memory problems found in Windows 3.1.

Excalibur offers an extremely rich GUI graphical environment and a long impressive list of features.

They include:

- Windows multitasking
- On-the-fly data compression
- CD-ROM support
- Simultaneous bi-directional protocol
- Drag-and-drop file management
- Multi-user chat
- The ability to view GIF files while downloading
- Error correction graphic transfer
- A very complete user accounting facility
- Ability to generate thumbnails of GIFs and JPEGs
- Bulletin editor
- Screen creation program



All of these features are contained in a package that is as easy to install and use as any Windows program.

Weber said the most important and innovative portion of Excalibur is its multi-tasking abilities. "There is no task that will halt the BBS. Anything you do will not halt the system, so you can download, read mail, chat — everything can be done simultaneously. Everyone said this couldn't be done under Windows. We are very proud of this accomplishment. It is one of the more startling features of the system," notes Weber.

Much of the speed is due to the client/server architecture of Excalibur, which splits the needed processing time and computing power between the host and caller computers. The result is speed and an extremely rich user interface.

The client program is a Windows terminal and can be distributed at no charge to users. The program is not very big — only slightly larger than 1-MB in its compressed state. It also installed with no problems. Using it could not be easier — just choose the dialing directory from the Windows pull down menu, select the service you want to call and wait for the connection.

The host package is divided into separate segments that are named according to the overall King Arthur theme.

THE HOLY GRAIL

The Grail is the database server for all the programs. Once launched it runs in the background and does not require any input or attention from the sysop. This program handles all of the inter-program and inter-process communications, which means it can talk between nodes and handles such things as multi-node chat. This is both the engine and the traffic cop for the program.

ARTHUR

This offline program is the main control system for the BBS. Here is where you will find the settings and controls for Excalibur including such things as the BBS name, file directories, whether or not to allow handles, age for adult users, security features and conference set-up.

Excalibur allows for 35 languages, besides English and the ones you would expect like French, Italian, Spanish and German, there some unusual ones (Turkish, Chinese, Hebrew, Esperanto and Polish) and even ones I have never heard of, like Bahasa and Urdu.

The security features are also quite complete. Security levels can be set for access to conferences, for viewing, uploading and downloading of files and for messages within a conference. There are also facilities for allowing a user to read/write messages for certain conferences and for adding/killing topics.

The User Log functions are also complete, allowing space for name, address, date of birth, phone numbers, and comments. Caller limits can be set for the number of calls, amount of time online, byte/time limits (this can be set per call, day, week, month or forever). There is also full setup facilities for security flags and an extensive call log feature. Under the call log, there are some 18 features that you can choose to be tracked. These include such items as: log in/out, lost carrier, mail left, files uploaded/downloaded, new user, used a plug-in program, or paged another user.

If this is not enough, Excalibur also includes a "record" for each user which gives information on the number and byte amount of files uploaded and downloaded, the byte/file ratio and the total revenue from the selected user.

One of the little features that I like are keyboard macros called "quick chat." This allows you to program in a short phrase or comment that can be sent to a selected user by pressing the chosen function key. So, pressing F1, might send, "I have an important message, join me in chat!"

CAMELOT

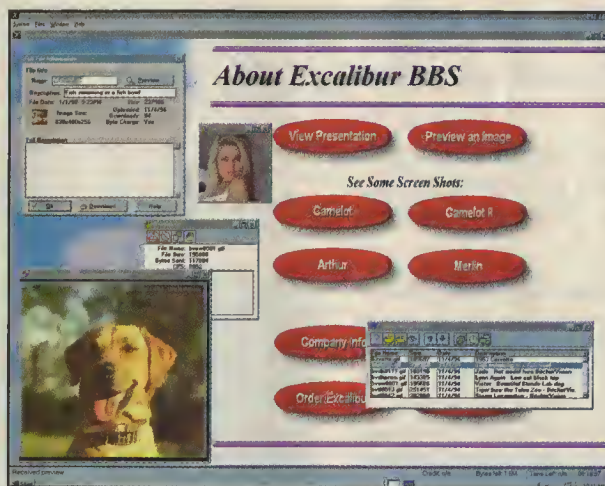
This is the actual BBS program or host itself. It keeps track of all the incoming traffic and does all the needed house keeping chores. This is the actual piece of the mosaic that interfaces with the caller's terminal program. It is the "server" in the client/server system.

SCRIBE

This is the bulletin editor. Scribe allows you to create bulletins and other text files with multiple fonts, bolding, italics, underlining and colors. Essentially, it is a text editor or mini-word processor that "creates data in a streamable format suitable for Excalibur." Scribe is extremely easy to use. All of the features are available via the drop-down Windows style menus.

MERLIN

This is the screen editor program. It allows you to create screens that include graphics, text and images (JPEG, GIF or PIC). Merlin is also where you can set security features for access to the individual screens and run plug-ins. "Merlin is the screen design program which allows you to lay out screens with our proprietary graphics protocol. Whether its Bezier curves, rectangles, oval, fills or placing a 24-bit indirect image object, it is all handled through Merlin. These screens are then passed through Camelot. These are host-side graphics, so nothing gets transferred to the user. Our graphics protocol is very fast," said Weber. The protocol is an 8-bit protocol with 256-colors.



DR. TIM THE ENCHANTER

Eric Weber describes this module as being "very similar to Dr. Watson which will look for any errors in plug-ins or in the host, then either recycle the node, terminate it or reboot the system based on any errors it finds. We currently have a patent pending on this process. With Dr. Tim, the board should never go down."

INTERNET READY

"Excalibur is an Internet client and host, meaning that people can use a PPP or SLIP account along with our software and connect to any Excalibur system on the Internet. Many of our users are using a 28.8-bps PPP account from their provider through Windows95 or Trumpet Winsock. Once that connection is established, our host polls for incoming Internet traffic," said Weber. In this case, the caller would telnet to the host using the Excalibur client program which allows them to receive the full graphical interface.

Canadian software developer Mortimer Online — (604) 294 - 2995 voice, (604) 294-2955 data or <http://www.mortimer.com> — offers a plug-in called Flipknot that allows for "pass-thru"

Web browsing through an Excalibur host. Weber says this is "similar to Compuserve and American Online in that users can call in and do Internet browsing without any knowledge of the Web." He adds that "we can get up to 50 Internet nodes on a single PC, providing that PC has enough horse power."

A number of other plug-in modules are also available and Excalibur encourages third-party programmers to create more. Weber notes, "we have a full API with about 400 function calls. All the plug-ins need to be written in C or C++ via Microsoft, Borland or Delphi. This (the API and spec) is free for any purchaser of our software."

Excalibur Communications has developed a database plug-in called *Gueniviere*. Based on the recently released Borland Database Engine (BDE), this database application will plug directly into existing Excalibur systems. "The screen formatting is based on HTML — very similar to what you would see on the Web, except that we will have all our graphics formats embedded into it. It will also display JPEG, GIF and BMP," comments Weber. *Gueniviere* will also allow for user-definable searches. This feature will permit callers to search and view the entire database, highlighting query results, or receive just the query matches. It is expected to be available by the end of 1995.

USER FRIENDLY AND FUN

I found all of the Excalibur systems I called (about 10 of them) to be surprisingly fast and extremely rich in their user interface. Each of them also make good use of the multimedia capabilities of Excalibur which include sound and various screen effects.

The use of sounds added a fun element to many of the systems that I called. Being informed that I have mail waiting by the voice of a aging hippie saying, "Hey dude, you got mail!" adds a new level of interest.

I also enjoyed the available screen effects. Excalibur allows for a wide range of pans, wipes and dissolves (similar to those found in the video industry) which give a distinct feel of motion to otherwise static graphics. All of this is enhanced by the small and, consequently, fast, graphics themselves. Excalibur utilizes a proprietary graphics protocol to obtain complex graphics in a small file size. The size of a full screen graphic ranges from just 3-Kb to about 35-Kb.

CONCLUSIONS

The product has been in beta for a very long time, but the wait seems to have been worthwhile. Excalibur is a robust program that has the muscle to handle the toughest of assignments and the sophistication to deliver a rich graphical environment.

Unfortunately, I had only a two-node system for testing, so I cannot comment on the performance when a larger number of lines are attached and running. I did, however, find the system to be very stable. In all my tests, I was unable to make it crash or even breath hard when processing multiple tasks at one time. It is also fast. The display of even complex graphics was quick whether accessing the system via a dial-up modem or over the Internet.

I was also impressed with the arsenal of user and accounting utilities included in the package. It seems they have thought of just about everything when it comes to keeping track of users and their activities.

"Compared to other client/server systems like Mindwire and Worldgroup, Excalibur has a couple of strong advantages."

When compared to other client/server systems like *Mindwire* and *Worldgroup*, Excalibur has a couple of strong advantages. The major one is its use of C or C++ as the programming language for third-party add-on programs. Yes, it is more difficult to use and understand than Visual Basic and is certainly not something the novice may want to tackle, but this is more than compensated for in the results. Both C and C++ are powerful languages that, in the hands of an experienced programmer, can produce tight, efficient code. The result is a program that takes far less space on the user's hard drive and one that is far more efficient than a Visual Basic program.

Another advantage to the Excalibur system is that it does not leave you with megabytes of files all over your hard drive after calling a site. I called the Excalibur support BBS, looked through all their menus, heard all the sounds and saw all the graphics. When I disconnected, I had only an additional 15 files which took up a scant 180 Kb. This was especially welcome after calling other client/server systems and ending up with as much as 8 Mb of additional files.

Currently, the biggest downside to Excalibur is the lack of clear and comprehensive documentation. However, Eric Weber assures me that they are attending to this area of the program. Certainly, all the docs will be ready when version 1.0 ships (currently, planned before the end of 1995).

Overall, Excalibur is an excellent program that provides all of the tools needed for a first-class online system. If you have not seen Excalibur, I strongly advise you to take a close look before deciding on a BBS for yourself or your company. ♦

CONTACT INFO:

Excalibur Communications Inc.
2530 East 71st Street, Ste. E
Tulsa, Oklahoma 74136
(918)496-7881 voice
(918)496-8113 BBS
(918)491-0033 fax
<http://www.excalbbs.com>

CONTACT:

EXCALIBUR
Excalibur Communications, Inc.
4410 East 80th Place
Tulsa, Oklahoma 74136
Tel: (800) 392-2522 or (918) 488-9801
BBS: (918) 496-8113

COSTS:

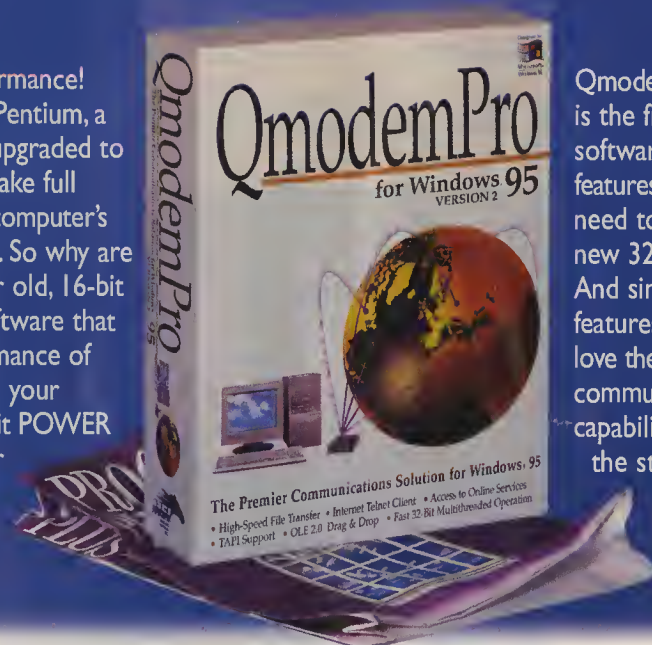
(NOTE: Prices quoted are for the Beta version. The cost will increase by "approximately \$100 per system with the release of version 1.0 of Excalibur.")

2-line system: \$99.00
4-Line System: \$199.00
8-Line System: \$299.00 (Includes free Internet Connection Module)
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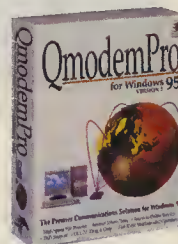
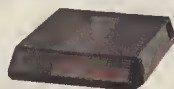
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**The BeBox
- Not Just
Another PC**

Julie Petersen is a writer, recognized computer artist, and longtime telecommunicator. She does software design and graphics for Abiogenesis Software, makers of electronic dictionary authoring software. <mailto:jpetersen@abiogenesis.com>

THE NEW BeBox COMPUTER

CONTENDER FOR INTERNET APPLICATIONS

by Julie K. Petersen

It's been twenty years since personal computers were introduced, the market is well established, and most changes are evolutionary, not revolutionary. No one expected a newcomer to show up at the starting gate.

Nevertheless, like grass piercing a concrete sidewalk, an optimistic upstart debuted at the recent Agenda '96 conference in Arizona. Be, Inc. of Menlo Park, unveiled the **BeBox**, a dual processor, Power-PC-based computer. With its preemptive multitasking, real-time database, slick sound, graphics, and built-in Internet support, this system excels in the high-stakes areas of telecommunications and multimedia. The Agenda demonstration provoked a standing ovation, only the second one in the history of the conference.

CAVEATS

But why risk money on a new brand of computer? Will the BeBox be around in two years? Will developers support it? Isn't a high-powered workstation too expensive for the consumer market? These questions deserve answers, yet there are no crystal balls, only consideration of facts and personal choices. Historically, there has always been a percentage of people willing to bet on a dark horse like the Be, if it has good bloodlines, and there's an experienced jockey holding the reins.

WHO'S ON FIRST?

The success of a new venture depends on management and marketing policies. The BeBox is new, but

Jean-Louis Gasee, the President of Be, has already been around the track a few times. As former President of R&D and marketing at Apple, Gasee participated at a significant time in Apple's history. Gasee is emphasizing support for third party developers and promotion and distribution through new channels emerging on the Internet.

Gasee readily concedes the business market to the PCs, instead, targeting the two to nine percent of technically literate users who purchase systems based on specifications and computing power. That formula could lead to annual revenues of \$500 million or more. The BeBox probably won't dent PC sales, but it could shake up the workstation market. Even the basic configuration of the BeBox (more powerful models are planned) compares favorably with Suns and SGIs, yet surprisingly, it costs under **\$3,000** for a complete system. Compatibility with PC peripherals is part of the reason for the low cost.

WHAT'S INSIDE?

The most significant aspects of the BeBox are multiple CPUs, and a fluidly multitasking, object-oriented, real-time operating system. The OS is 100% native code, designed for multiple PowerPC RISC processors. The workload is currently distributed over two PowerPC 603s, running at 66 MHz. Is that all, you might ask, when Pentiums clock in at 100 MHz and higher? The raw speed of a single processor doesn't tell the whole story, however.



**Jean-Louis Gasee,
President of Be**

The Be demo indicates that the BeBox is fast and efficient, and Be asserts that adding processors can sometimes improve performance more cost-effectively than cranking up clock speed. Additional models, with up to eight processors, are planned.

The BeBox is a technophile's dream, loaded with I/O ports. There are three two-way infrared ports, two high-resolution joystick ports, a parallel port and a 50-

pin external SCSI II connector. The 16 channel CD-quality sound is accessible via two midi ports (one in and one out per channel), there are four built in RS-232 serial ports, and an A/D & D/A I/O port aptly named the "Geek Port" because it offers expansion opportunities for hardware hackers.

Ethernet ports are conspicuously absent, because Be didn't want to lock users into a specific networking protocol or hardware. The BeBox has eight internal slots: three 33 MHz PCI slots and five ISA slots. Network cards such as the NE 2000 or 3Com can be installed according to your needs. The BeBox comes with TCP/IP software support, PPP, FTP and Telnet.

Basic memory configuration is 8 Megabytes, expandable to 256 with 72-pin SIMMs. The BeBox uses PC keyboards, PC high density floppy drives, PS/2-style mice, and PCI SuperVGA cards (Be suggests the Number 9 GXE 64). Inside are SCSI II and IDE internal controllers.

If you're intrigued by the new ISDN technology, IBM has introduced a card called WaveRunner, a digital modem that fits into an ISA slot, which uses ISDN lines to communicate with other ISDN devices, or the more conventional analog modems and fax machines. It looks like an opportunity for an enterprising programmer to port the WaveRunner drivers to the BeBox.

But hardware is only half the story. Great hardware with no operating system is like a high performance car with no steering wheel. Good hardware is useless if it doesn't take you where you want to go.

The BeBox Operating System

The Be graphical environment is known as the Browser, similar to the Desktop on the Amiga and the Finder on the Mac. Underlying the GUI is a server with POSIX functionality without being fully POSIX compliant. NeXT users will recognize a similarity to UNIX Mach.

The Be GUI looks like a blend of Mac, Amiga and NeXT, but goes beyond most predecessors with a real-time integrated database. This database is available to every application.

File lookups on other systems, whether Windows or Mac, often require extra mouse clicks (reopening windows, moving icons, sometimes even rebooting) before the desktop is updated. BeOS updates on the fly; change a file name in one place, it changes the others. It's smooth and natural. The database-style file structure offers more ways for a user to seek and display information. The selection criteria for file names, sizes, and types can be listed in many combinations. This database integration opens opportunities for developers of BBS and other telecommunications software.

THE BEBOX ON THE INTERNET

The BeBox is a killer World Wide Web machine. The BeBox demo shows four web browsers running simultaneously, each linked to a different site through the Internet, each displaying graphics and text, while sound and animations are playing in the background with no perceptible slow-down or loss of quality. A variety of graphics formats can be automatically processed through the use of datatypes. This allows for rich interaction with the Internet and multimedia BBS systems.

Let's illustrate this with an e-mail example. Suppose you have three messages, one from your grandma, the second from your cousin in art school, the third from your girlfriend who's studying music at Julliard. Grandma just started using

computers and she's sent you a simple text message. You click it open and read it. Open the second letter and you're treated to a 3D animation of a dog jumping through a hoop. The BeBox recognized the datatype as an animation and automatically called the correct utility for displaying the series of images. You don't have to download the file, check the file extension, and run a graphics program in order to see it. Since the BeBox is multitasking, you can leave the animation running while you click open the third mail message. This one is a sound file, that your girlfriend recorded while practicing

for a recital. This sensory-rich way of viewing information is perfect for searching the Web, especially with Internet and television technologies beginning to converge.

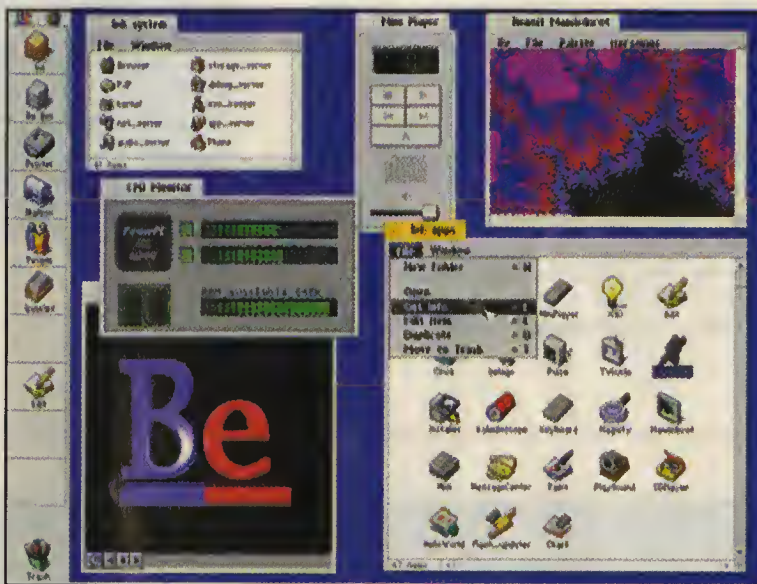
AVAILABILITY

Where can you buy one? You can't, yet. The BeBox is available only to selected developers. Well, what if you're a developer and you want to port an application, or build a completely new one? Then you can download a developer application on the Be web site at <http://www.be.com>. Be, Inc. wants to have an installed base of software ready to go before the BeBox ships to consumers in early 1996.

Can you see one of these machines in action? To satisfy some of the demand for a first-hand look at the BeBox, Be, Inc. is now coordinating regular demos at their offices in Menlo Park. They also have a demo video tape available which shows some of the multimedia and Internet capabilities of the machine.

THIRD PARTY DEVELOPMENT

How hard is it to program this machine? No one knows the answer to that yet, since it can take months or even years for programmers to fully explore the possibilities of a new architecture, but the BeBox has a head start with the installed base of Macintosh software. The BeBox is an object-oriented system, programmed in C++, using Metrowerks' *Code*



Be OS Browser/Desktop

Warrior programming tools. Since a large amount of Mac software has been created with Code Warrior, there may be hundreds or even thousands of applications that could be "brought over" from the Mac without the necessity of starting from scratch.

Code Warrior does not yet run native on the BeBox. Metrowerks is soon scheduled to ship a BeBox version, so a PowerMac running Code Warrior 6.0 or above is the current development platform.

The developers' support consists of a 500+ page binder, header and library files which can be downloaded from the web site, and Code Warrior on CD-ROM. Early reports from developers indicate that the information seems logical and easy to digest if you have some prior experience with C or C++.

FUTURE POTENTIAL

Like the wild-eyed guy waving a signboard predicting the end of the world in 1984, doomsayers incorrectly said that the Mac and the Amiga would be dead by 1987. They overlooked the fact that new technologies spawn new industries, notably desktop publishing and video.

The BeBox isn't going to take over the market for business applications, so hang on to your PCs. But it may establish itself as a powerful Internet server, or a dedicated multimedia or video workstation.

Innovation comes from entrepreneurs. Unlike established computer companies, Be isn't hampered by pressures to maintain downward compatibility. If you have a comfortable business with a steady cash flow, the BeBox may not suit your needs. But if you prefer the road less travelled, the BeBox offers workstation capabilities at consumer prices. It is a platform for implementing new ideas, exploiting niche markets and establishing turnkey solutions for as yet unimagined markets in the telecommunications industry. Those who take the risk to explore its possibilities will have fun doing so, no matter where it may lead. ♦

CONTACT:

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WEBWATCH



BABB'S BOOKMARKS

by Chris Babb

WEB CAMERAS - SEE THE WORLD THROUGH THE EYES OF THE NET

Happy New Year everyone! This looks like the start of an exciting year in terms of everything online and I'm looking forward to seeing what more can possibly happen this year.

"Crazed Controller Cam" could show us what really goes on when the air traffic controller computers crash like a beta copy of Netscape. I think I'll even put my own up. "Chris's Cat Can Construction Cam." Focused at... well, you get the picture.

At the beginning of last year, I noticed a few interesting sites that featured live video shots, updated periodically. A most interesting concept and one that really does bring the world, or at least some interesting sights, to your desktop in almost real-time.

Looking around a year later, I have been pretty much knocked up-side the head by the sheer number, quality and creative genius that have sprung from the initial offerings of a year ago. Back then, we were looking at Coke Machines, coffee pots and the temperature of someone's hot tub with a weather shot or two thrown in the mix. Now, we are seeing offices, bathrooms, city skylines, canyons, mountains, feet, waterfalls and even a cross country motorcycle tour, all updated at regular intervals for our voyeuristic pleasure. You name it or even suggest it and someone will find a way to put it on the Web.

It almost frightens me to think what we will be seeing next. Maybe we will see "The Convenient Cam" where we can watch unsuspecting souls grabbing a cup of coffee. "Court Cam" would be pretty cool for all those still suffering from O.J. withdraw. "Corn Cam" — yeah, I like this one. Focus a camera at a corn field and let us watch it grow. An excellent educational experience for city-bound folks. At the end of the growing season, all the hourly shots could be combined (no pun intended) into one massive MPEG for us to gawk at.

What makes these sites and this concept so great is that it really does take us someplace; anyplace in the world. There is something about seeing the sunset in San Francisco, well after the sun has set in Chicago, and seeing what the weather is like within the last few minutes somewhere in Sweden. It is also an excellent way to offer something dynamic and exciting on the Web. You just never know what you're going to see from hour to hour, which is exactly the way I like it. Web Cams are just one of the ways that the entire world can become an extension of our desktop.

Well, let's extend that desktop with a listing of some of the more interesting Web Cam sites available on the Web today. There is now a huge collection from which to choose and so little column space to list them all in! In order to give you the biggest bang for the buck, I'll dispense with "picture it in your head" type descriptions and just start in with the sites. A few words of warning though. As you will see, these sites seem to go up and down at irregular intervals. I usually get one or two disappearing sites when writing up my articles but never like I have with these sites. If a site seems to be unavailable, let it sit for a few moments. All of them work a little differently and while you may think the site is down, it could actually be getting a picture and processing it as you wait.

Here come the cams...

Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via mailto:chris.babb@aquila.com

QUICKCAM

<http://www.pcworld.com/connectix/qcchoice.html>

Well, sort of. This first site is in no way a Web Cam, but this is one of the devices that make it possible and affordable for anyone with a little knowledge, a computer and an Internet connection to put up their very own Web Cam site. It's available for both the Mac and the PC and is currently going for under \$100!

I found several sites that are using this little gem for their Web Cam projects and it is currently being used on a cross country motorcycle Internet tour of the US. I think I'll have to get one for my very own Web Cam Site!

KPIX ONLINE: SAN FRANCISCO VIEW

<http://www.kpix.com/live/>



From atop the Fairmont Hotel on Nob Hill in San Francisco, we see various shots of the Golden Gate Bridge, the Bay Bridge, views of the Downtown Skyline, Coit Tower, Fisherman's Wharf, the Marina and Pacific Heights.

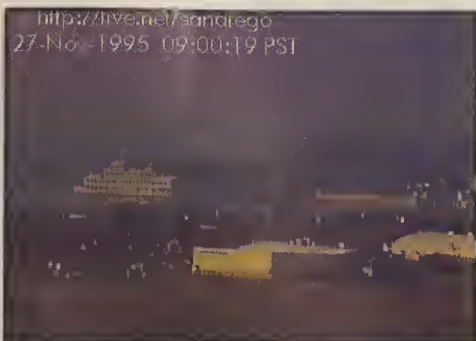
These shots are updated every 5 minutes and if you are sitting on this page when a new shot comes in, the newest image will be loaded automatically.

Also available are time-lapse images from the last hour, the entire day and several collections of the KPIX staff's favorite shots. A narrative on the equipment being used to bring you these beautiful pictures is also available along with a satellite photo of the area covered by the camera. The list of equipment is quite impressive and interesting but one that very few amateurs will be able to match. Unless you are running a TV station, that is. Be sure to check this one out.

SAN DIEGO BAY CAM

<http://live.net/sandiego/>

This is the first Web Cam page I have seen that is using some of the newest features of Netscape 2.0. The frames layout is a neat idea and adds a flare to the normalcy we get used to on the Web. This page is also using the Netscape "push" feature that starts a 30-second animation sequence with the latest cam shots as soon as you load the page. This is pretty cool as it differs from



the normal "Here's the last picture I took" concept that most of the Web Cam pages share.

Other features offered are the ability to view previously captured shots from throughout the day, time-lapse video of the shots on the 1/2 hour from the day before, the LiveNet FAQs on what this site is all about and links to other pictures and Web Cams on the Net. If you're lucky, you'll even get to see a plane streak by on its approach for landing.

CANYONCAM

<http://www.vigra.com/misc/peek-auto.html>

My favorite of the Web Cam sites I have visited. This is a simple shot of a small canyon outside an office window. What makes this site extremely interesting is that several weeks worth of shots have been put together



into an MPEG video. Now, many sites are doing this but this one has captured some really cool action. At one point, I felt like I was watching a 90's version of H. G. Wells' The Time Machine as I watched bulldozers built right through the canyon. The cloud formation MPEG was also pretty interesting.

This site is being used as an interesting demonstration of a product called VirgaPix, a video digitizer by Virga for the Sun SparcStation. Other equipment being used is a Sony Handycam 8mm recorder along with some shell scripts and Perl scripts for capturing and converting the pictures and for generating the HTML code for displaying the pictures. All the information you need to repeat what is happening here is available from this page.

VANCOUVER NETCAM

<http://www.concordpacific.com/~jmorriso/camera.cgi>

Concord Pacific Place is the largest urban waterfront development project on the North American continent and is located in beautiful Vancouver, British Columbia. This view features a shot of Coal Harbour and the North Shore Mountains from Downtown Vancouver.



The image seems to be updated at 1 minute intervals and you have the ability to request previous pictures and more current pictures as this page does not automatically update when a new picture is taken. Also available are MPEG compilations of previous days' pictures.

SARABANDE WEB CAM

<http://www.sarabande.com/>



This page features two different cam shots: a color shot from the corner of Broadway and Houston in New York and a black and white of a car wash somewhere in New York. Both of them seem to be updated hourly. The

shots at Broadway and Houston are of excellent quality and you also have the ability to see several previous hours' worth of shots on a single screen.

RSN WEATHER CAM

<http://www.rsn.com/cam.html>

RSN (Resort Sports Network) provides about 25 million vacationers with useful information on weather and trail conditions, special events, dining and real estate at resorts throughout the country on in-resort cable TV networks.

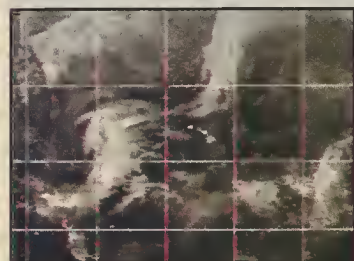


Their Web Cam collection is also impressive. From these pages, you can view live Web Cam shots from resorts that range from Cape Hatteras, North Carolina to Mammoth Mountain, California with a few stops in between. Each of these resorts have a fairly current outside shot of the featured sport and the current weather conditions. Some of them also sport a Realaudio feed for telling you the conditions if you'd rather not read it. If you're minus a Realaudio player, you can even download it on the spot.

Other great features are the Web Cam Shot Of The Day, which is a randomly selected resort shot, and the ability to see what some of the resorts look like through the magic of CU-SeeME videoconferencing software. This is the place to look before you take your next vacation. Much excellent information, great implementation and lots of different views make this one of the best Web Cam sites on the Web.

SATELLITE OCEANOGRAPHY LABORATORY

<http://www.satlab.hawaii.edu:80/>



This is a site that would have fit very well into my Space/Satellite article from June, 1995. This page is updated with hourly satellite photos and images of Hawaii. The photos are taken by polar and geostationary satellites that are



measuring cloud top and sea temperatures along with providing infrared and visible images. Among the other interesting items being tracked are drifting buoys in the ocean.

The Live Hawaii cams feature 3 different views; Manoa Valley and Sunset Beach on Oahu and Iao Valley on Maui. All of these shots, including the satellite shots, are available as still images or in MPEG format for time-lapse action. Archives of past shots are also available either through the Web or through FTP. An extremely interesting site.

HONG KONG STARCAM

<http://www.hkstar.com/starcam.html>

Live image from Kowloon, Hong Kong, of Nathan Road. Updated every 10 minutes. Provided by Hong Kong Star Internet Ltd., an Internet Service Provider. This site also sports a list of links to other Web Cams, several of which are mentioned here.



THE BIG SKY CAM!

<http://www.gomontana.com/skycam.html>



An interactive guide to Montana courtesy of the Bozeman Daily Chronicle. Features a live picture from their newsroom and an outside shot of beautiful Montana.

Both cams are updated at 5 minute intervals. While the inside shot is fairly typical, the outside shot, facing to the west, will help you gauge the current weather conditions and will give you a spectacular shot of the Montana setting sun.

EASTNET PARKING CAM

<http://eastnet.educ.ecu.edu/image.htm>

A simple shot of a parking lot. Nothing more, nothing less. Nothing else. Updated every 2 minutes, 24 hours a day.



THE EXPRESS SYSTEMS NEEDLE CAM

<http://www.express-systems.com/expsys/needlecam/spacendl.htm>



The Needle Cam is focused on downtown Seattle from the Express Systems corporate offices and includes the famous Space Needle, built for the World's Fair which was held in Seattle in 1962. An interesting note about this site is

that you may see some unexpected activity within the capture. Keep a lookout for the monorail and news helicopter.

This image is updated at 1 minute intervals, 24 hours/day. The capture equipment consists of a 386/33 computer with a MediaVision Pro MovieStudio Video Capture Board, running Windows for Workgroups and Express Systems hDC Power Launcher. The MediaVision board captures video at 15 frames per second at a resolution of 320 X 240 in 256 colors and the hDC Power Launcher software provides the ability to run scheduled events which in this case is capturing the image, saving it to disk, converting it to .GIF format and transferring it to their Web Server.

MOUNT RUAPEHU

<http://www.actrix.gen.nz/ruapehu/>

I remember watching the news when this volcano in New Zealand blew its crater. At that time, I was wishing that I could see more of the actual eruption, but I also knew that unless this guy blew like Krakatoa, I was never going to see it again on the news. Thank goodness for Web Cams.



After the volcano blew, Julian Meadow, Richard Naylor and Don Stokes decided to set up a Web Cam to capture the mountain as the eruptions continued. This cam currently sits in the living room of Chris Griffin, General Manager of The Grand Chateau at Whakapapa village, and is updated every minute. The complete story on how this site came to be is available and is pretty interesting.

Also available from these pages are MPEGs, collected over the last few months of the volcano and a compilation of pictures turned into MPEGs from the current day. The initial eruptions are spectacular and make a nice addition to anyone's collection. If you're interested in watching an eruption in real-time, be sure to pay attention to the Volcano-cam View Ratings. These ratings range from 0 (Zilch) for when nothing's happening to 10 (Frontpage) for

when the big one comes. Be sure to dig around a little for the satellite photos of the volcano erupting and seismology data that is also available.

This page is unique and interesting and for anyone with an interest in the natural heavings and rumblings of the Earth and is a definite adder for your bookmark list.

MAWSON LIVE PICTURE

<http://www.antdiv.gov.au/aad/exop/sfo/mawson/video.html>



This unique site is located on the eastern side of Holme Bay, Antarctica, and was established on February 1954. The Web cam is just a little newer than that and is currently updated hourly. The capture equipment is listed as a normal video camera who's signal

is fed into a Macintosh computer where it is processed and sent to the Australian Antarctic Division's Web Server located at Kingston, Tasmania.

Other information is available on the Mawson station web site, including weather information (it's currently a balmy -17C), information on the research being conducted and a large list of other Web servers that feature other stations in Antarctica.

CURRENT VAIL IMAGE

http://vail.net/internetworks/whats_new/

As the name says, a current image of beautiful Vail, Colorado. This image is updated every 2 minutes. Also available is a series of thumbnail images, sent to you via the "push" feature of Netscape, showing a full days worth of images in time-lapse.



THE UNIVERSITY OF WASHINGTON CAMBOTS

<http://www.cac.washington.edu:1180/cambots/>

Several views of the University of Washington at 5 minute intervals. Red Square is a shot of their... well, Red Square. Every once in a while, you'll notice a friend or two may join you in the shot. There are also 2 other cams that are documenting a construction site that should be very interesting when they finally complete it and turn it into a MPEG. A couple of other interesting items and some creative image editing along





with an archive of MPEG videos and still shots from previous days.

The setup for grabbing all these pictures is described in fair detail. The camera is a bottom-

of-the-line Sony camcorder connected to an Intel Smart Video Recorder capture card that is installed in a Zenith 386/20Mhz computer. Microsoft Windows For Workgroups, a Visual Basic Program and a conversion script, captures, saves and converts the image to a .GIF and generates the Index page.

NIAGARA FALLS CAM

<http://FallsCam.niagara.com/>

A stunning view of Niagara Falls. This image is taken from atop the Sheraton Fallsview hotel, which would account for the very visible commercial blurb plastered on the image itself.



This image is updated every second and if you watch closely, you can see cars and buses zip by on the road in from of the falls. This site also includes 10-second time-lapse MPEG videos for your viewing pleasure. Brought to you by Internet Connect Niagara.

CHICAGO'S LAKEFRONT

http://www.habitat.com:80/real_time_view.html

A real-time view of the Chicago Lake Front from The Buckingham Residences. This shot captures Navy Pier in all of its splendor. For those who have never seen Chicago's beautiful private view of Lake Michigan, be sure to take a look at this site.

This site claims to be on-line and updating on a 5-minute basis. I beg to differ, as it is currently daytime in Chicago, the month is November and I am seeing a nighttime shot from earlier in the summer. I am also currently looking at a live TV news shot, showing Navy Pier with nothing much going on. Certainly not an outdoor fair, as the Web Cam shows, in the middle of a blustery



Chicago winter day. The most interesting thing of all is that the shot is actually updating, although I suspect that this is just a continuously repeating loop from this summer.

I include this site in these pages, only because I have to have something to show off from my home town! And then again, I'm sure as soon as I send this copy off to Jack, the site will be back online and in "real" real-time.

NUTSITE® OF THE MONTH

This month, it only took a few minutes to nominate and elect this months NutSite®. I figured that since we are talking about Web Cams, why not a Web Cam NutSite®?

Biff The Bear's Potty Cam

<http://www.primenet.com/~rstbear/biff1.html>

Hey, what's next? I thought a bear was supposed to s\$#% in the woods, not in someone's bathroom!? Well, I guess some people will do anything to get attention. A truly nutty site in the finest of traditions.



Well, I hope you have enough to look at for this month. The Web Cams are fascinating and are becoming easier and more affordable for just about anyone to set up. The Connectix

QuickCam and the available capture boards along with the ease of visual basic and CGI's offer an affordable solution to anyone with the urge to strut their stuff. I hope more people do. I have a feeling that as the Browser war develops between Microsoft and Netscape, Web Cams featuring live, real-time video feeds will be the next thing I'm writing about and you're looking at.

I have these as well as all of my past articles virtually available for your clicking pleasure at:

<http://www.aquila.com/babbs.bookmarks/>

Again, I hope everyone will tell me of a site or two that they find especially pleasing and/or useful so I can share it with everyone else. And keep those Nutsites rolling in! Comments, good or bad (preferably good) should be clicked off to:

chris.babb@aquila.com ♦

50 More Web Cameras



http://citynight.com/cgi-bin/livecam.sh	Alameda, California
http://vista.homecom.com/webcam/cam2.html	Atlanta, Georgia
http://www.fokus.gmd.de/step/view.html	Berlin, Germany
http://www-l.openmarket.com/boscam/boscam/index.html	Boston, MA
http://www.gwha.com/cgi-bin/bouldercam	Boulder, Colorado
http://www.phy.hw.ac.uk/cairngorm/cgpic.html	Cairn Gorm - Scotland
http://www.cam-orl.co.uk/cgi-bin/pangen	Cambridge, England
http://www.rsn.com/~hattys/	Cape Hatteras, Avon, NC
http://www.algonet.se/~kelly/weather/tormesta	Dark Island, Sweden - Tormesta Bay Weather
http://www.mathematik.uni-freiburg.de/cgi-bin/cam	Das Hochleistungsbro - Denmark
http://www.tsr.srg-ssr.ch/photo/photo.htm	Geneva, Switzerland
http://eastnet.educ.ecu.edu/image.htm	Greenville, NC, East Carolina University
http://www.phys.ocean.dal.ca/video/camera.html	Halifax, Nova Scotia, Canada
http://planet-hawaii.com/	Hawaii - Aloha Cam
http://www.whnt19.com/weather/towercam.html	Huntsville, Alabama - WHNT-TV Channel 19
http://www.crs4.it/~france/LV/	Italy - Sardinia in VIDEO
http://www.rsn.com/~wildcat/	Jackson, New Hampshire - Wildcat Mountain
http://cil-www.oce.orst.edu:8080/scripps/latest.snap	La Jolla, California
http://www.odd.net/cgi-win/lakecam.exe	Lake of the Ozarks State Park
http://www.together.com/~heavenly/	Lake Tahoe, California
http://www.fountainhead.com/livecam.html	Los Angeles, California - Superstation Beachcam
http://205.232.5.4/neighbor.ncllk	Manhattan, New York - Limelight Cam
http://www.rsn.com/~tucks/	Mt. Washington, New Hampshire - Tuckerman Ravine
http://romdog.com/bridge/brooklyn.html	New York City, New York - Brooklyn Bridge
http://www.rsn.com/~conway/	North Conway, New Hampshire
http://satftp.soest.hawaii.edu/sunset.html	Oahu, Hawaii - Sunset Beach
http://www-l.openmarket.com/boscam/pacam/index.html	Palo Alto, California
http://www.igc.apc.org/mushroom/pine.html	Pine Junction, Colorado
http://goober.graphics.cs.cmu.edu/~ajw/	Pittsburgh, Pennsylvania
http://www.rsn.com/~rsndemo/	Portland, Maine - Portland Harbor
http://h2olily.rain.com/cam.html	Portland, Oregon - Waterlily Cam
http://www.gov.pe.ca/islandcam/index.html	Prince Edward Island, Canada
http://www.met.utah.edu/images/current/current_snapshot.jpg	Salt Lake City, Utah
http://www.cliq.com/Services/peek.html	San Francisco, California - Haight Cam!
http://sapphire.cse.ucsc.edu/SlugVideo/dream-inn.html	Santa Cruz, California
http://www.seanet.com/Users/lacas/loftcam.html	Seattle, Washington - LoftCam
http://www.bbsr.edu/weather.html#conditions	St. Georges, Bermuda Weather Page
http://www.ausys.se/weather/weather.exe?medium+eng	Stockholm, Sweden
http://www.rsn.com/~sloaf/	Sugarloaf in Maine
http://spectrum.com.au/citycam.html	Sydney, Australia
http://www.scri.fsu.edu/~dwyer/outside.gif	Tallahassee, Florida
http://www.wtv.com/skycam.htm	Tampa, Florida - WTVT TV
http://www.rsn.com/~gorge/	The Gorge, Hood River, Oregon
http://www.mco.edu/camp/camalli.shtml	Toledo, Ohio, Medical College of Ohio
http://www.cs.uit.no/~ken/images/big/weather.jpg	Tromso, Norway
http://kjr.com/camera.html	Tulsa, Oklahoma - KJRH
http://www.york.ac.uk/%7Ejat5/html/cap.html	UK - York University
http://www.eclipse.co.uk/cgi-bin/getvid.garden	United Kingdom - Absolutely Anything Cam
http://www.tieh.fi:8001/video.htm	Vaalimaa, Finland
http://www.dataplace.nl/dp/pages/foto.htm	Zandvoort, The Netherlands - Beach



PUBLISHING ON THE WEB by Michael Erwin

Part 12 — PUBLISHING ON THE WEB

WEB CAMERAS: KEEPING AN EYE ON THINGS

Continuing from last month's column on interactive HTML publishing, I thought we would cover *real* interactive HTML by showing you how to put up your own Web Cam! We have all seen some sort of camera on the web, whether it be Netscape's Amazing FishCam or Coffee Pot snap shots. Web Cams are for the most part totally a waste of time. And we all have time to waste. And besides that, it's kind of neat to do, not to mention fun!

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information [mailto: mikee@access.mountain.net](mailto:mikee@access.mountain.net)



"Dave, my column's gonna be a little late..."

As Chris Babb shows in this issue, web cameras come in all flavors. And I do mean all flavors. Why put up a web cam? Why not! You don't have to be an exhibitionist to put a web cam together or a voyeur to look at the images. Web Cams also are a big crowd pleaser. It may not seem like it, but it will increase your website hits. And with today's technology, you can do a good job for very little money. We will take a look at how they work, the ways to put together a web cam, and show the pros and cons of each.

Lets get started!

A web cam is a relatively simple thing, even for the technically challenged. There is 6 basic steps to installing a web cam:

- 1) A video camera is focused on the image of something or someone.
- 2) The camera transmits that video image via a cable to some type of image capture device.
- 3) The image capture device takes the image and saves the image to a file on a computer.
- 4) A client's browser requests an HTML document.
- 5) The HTML document includes the tag `` of the captured image file.
- 6) The browser requests, receives, and displays the image.

Simple, right? Most of you already now how to do the last three steps. The problem is how do we take an image from a video camera, save that image to a viewable file type in a place where we can access via the web?

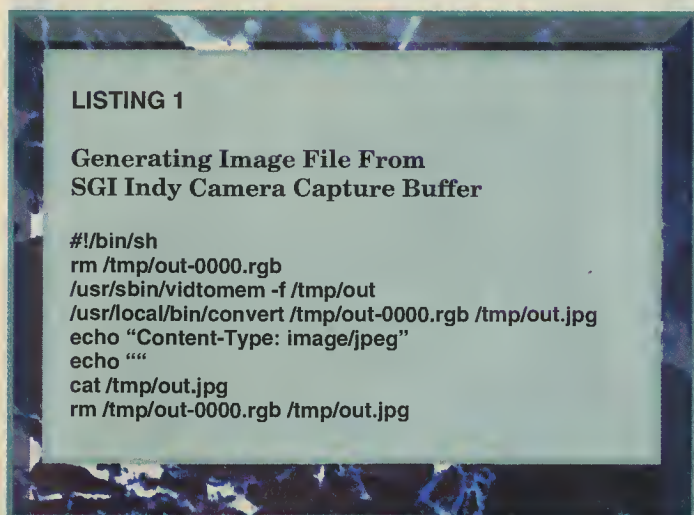
Let's start with the way most web cams are working right now, this also happens to be the most expensive way. Netscape's Amazing FishCam works in this way. You go and buy one of Silicon Graphic's Indy workstations. (See Figure 1 or <http://www.sgi.com>) At that point we have already spent over \$8,000 or \$9,000 US. Yep that is an EIGHT in front of the comma. If you are running a major corporate site or just have the money laying around, this is the way to go. SGI's Indy is an incredible box. An SGI Indy just has to be experienced to be believed. It is like driving a Ferrari. Not that I have ever driven a Ferrari, but I did sit in one. You just know it's not your father's Oldsmobile. Get the idea?



Figure 1: SGI's Webforce Indy Workstation includes a video camera

SGI's Indy comes with a cool little camera that normally sits on the top of the monitor. This little camera output goes straight into the back of the Indy. The video goes into a capture buffer, just waiting for some little program to do something with it. So let's assume you have an SGI Indy. We want to send this video capture out to the requestor's browser. Here is how we do it.

The Indy comes with some software that we can use to our advantage, VIDTOMEM and CONVERT. Look at Listing 1. If you put this shell script into your CGI-BIN directory, you can then create a HTML document that has a line like the following:

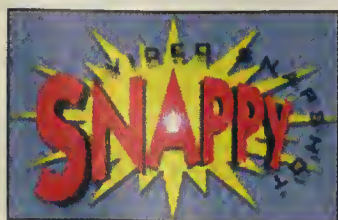


```
<A HREF="http://indy1.boardwatch.com/cgi-bin/liveweb
cam.cgi/">Web Camera</A>
```

When the client clicks on the **Web Camera** hyper-reference, the web server will run the shell script in listing 1, take the capture buffer's contents and save it to a file named **out-0000.rgb**. It then converts the RGB file to JPEG format and saves it in **out.jpg**. Then it sends the requesting browser the jpeg image. Pretty cool, huh? And to help testing, the Indy Webforce comes with Netscape's Communication server already installed. So that works out pretty well to. If you have the bucks laying around to pay for a WebForce Indy, this is the way to go.

Now for the rest of us. When I started this project, I wondered how cheap could we actually build a great web cam for? I am talking color 320x240 or better resolution and true color images. It needed to be reliable, able to update at regular intervals, integrate into our existing web site, and simple to operate.

While prowling around on the web I came across something called **SnapCAP**. (Figure 2 <http://www.halcyon.com/artamedia/snapcap/>). This neat little utility captures images automatically at specified intervals. It saves each image in either 24-bit DIB format or 256 color GIF format. It even allows you to save incrementally named files. All for the incredible price of free. The software requires that you use a little piece of hardware called "Snappy."



Snappy, the \$199 video capture solution

"Snappy" is a way cool piece of hardware. Snappy plugs into the parallel port of a PC compatible running Windows. "Snappy" is made by Play, Inc. (<http://www.play.com/>). The "Snappy" comes with software and is TWAIN compliant. The thing runs on a 9 volt battery and gets about 1000 video snaps before you have to

replace the battery. The amazing thing is it only cost **\$199**. Sounded to me like we found a way to do part of a Web Cam cheap. I found out that Bob Davidson, president of the Huntington Users Group and a computer buddy of mine, had one and I borrowed it for testing.

Since "Snappy" requires a PC running Windows, I scrounged up a 386-25 with 4Mb of RAM and a 120Mb hard drive with Windows. What else do you do with a PC that is a 90-pound weakling compared to today's wonder boxes? Any way, after plugging the "Snappy" in to the LPT1 port, we installed the software that came with the "Snappy." Way cool! I loved the simple and complete software. I put David Geller's "SnapCAP" into the same directory as the "Snappy" software. The SnapCAP zip file contained two files. **snappcap.exe** and **lead40.dll**. Within Windows, I added the "SnapCAP" program icon to the "Snappy" group. Is this simple or what!

The "Snappy" has two RCA video plugs labeled "Video-In" and "Video-Thru." How many of you have a big old video camera lying around? OK, put your hands down. If you don't have a big old video camera, you can pick one up for **\$100** bucks or so at flea markets or in the newspaper. It only needs to work and have NTSC video output, which is pretty much standard.

After hooking the video camera up to power and putting the video-out cable from the camera into the "Video-In" port on the "Snappy," we were ready to test. We then did a few test captures. Now I didn't take apart Bob's "Snappy," gizmo, but if you listen carefully when it snaps a video capture, you can hear what sounds just like a 35mm camera taking a picture. I wonder if that's why they call it a "Snappy?" You can adjust the "Snappy" with its 3-D ray-traced setup screen, and save the settings. I set it to capture video at 320x240 resolution and saved the settings.



Figure 2: SnapCAP sets image resolution, capture intervals

The easy part came next. I launched "SnapCAP." (Figure 2) This program is simplicity and elegance all in one. I love it when a program is neat, efficient and easy to understand. I set "SnapCAP" to take 320x240 images every 5 minutes. Everything was going smoothly — too smoothly. Then we hit the snag.

The web server here at EVE is a modified NCSA server running on BSDI's UNIX. "SnapCAP" is running on Windows based PC. How do we put the captured GIF into the BSDI box? I decided to put Bob Denny's **WIN-HTTPD v1.4** on the windows box.

Now this isn't a problem if you are already running a Windows based web server like O'Reilly's **WebSite**. You just install the "Snappy" and "SnapCAP" on your web server.

I installed Win-HTTPD following the instructions that come with it. If you want to see how to install Win-HTTPD look in

the June issue of *Boardwatch* where I covered it in detail. If you don't want to find the June issue, here is the simple directions to install Win-HTTPD.

```
MKDIR C:\HTTPD<ENTER>
CD\HTTPD<ENTER>
```

```
Copy the Win-HTTPD zip file into C:\HTTPD
PKUNZIP -D WINHTTPD.ZIP<ENTER>
```

Of course, you have to be running some TCP/IP stack on the Windows PC, but that's all there is to setting up Win-HTTPD.

Now add the Win-HTTPD program icon to the "Snappy" program group. Launch Win-HTTPD. Minimize Win-HTTPD. Launch "SnapCAP". Set the Captured File name to **C:\HTTPD\HTDOCS\WEBCAM.GIF**. I want our Web Cam to have an updated GIF every 5 minutes. Set the capture interval to 5 minutes. I set the video resolution to 320x240, 256 colors, and GIF output. (Figure 2) Then click on the Green Traffic Light button. **WEBCAM.GIF** now is written to the hard drive. Five minutes later... SNAP! The process repeats itself.

Now I used the HTML page in Listing 2. I put this HTML document on our web server — <http://www.eve.net> — to produce the page shown in Figure 3. The line that retrieves the GIF from the "SnapCAP" server is the one that reads:

```
<CENTER><IMG SRC="http://198.77.21.49/webcam.gif">
</CENTER><BR>
```

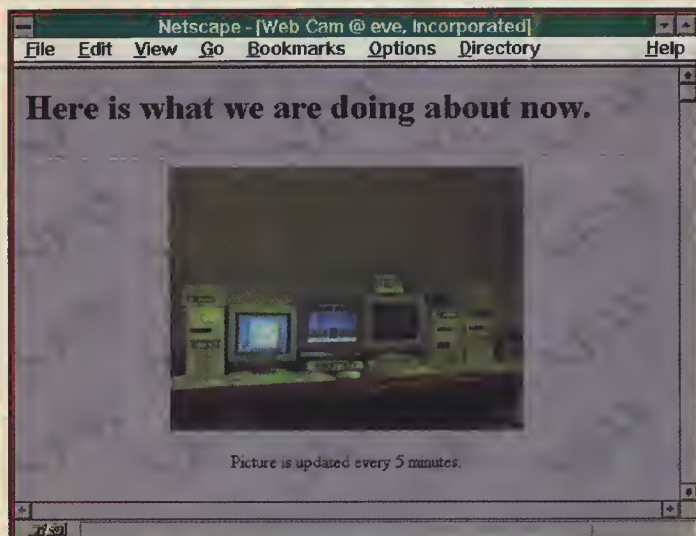


Figure 3: Mike's Web Cam page at eve.net

So we now have one Web Cam! Remember if your web server is on the same PC as the "SnapCAP" you will need to only change the `` line to put ``.

Cons of a setup like this is that it requires a separate PC if you are running on UNIX based web server. You need to use a video camera. This can lead to some additional expense if you don't have one. And after 1000 snaps you will need to change the battery. So that's why you go to Radio Shack and buy a 9 volt battery eliminator. I also had to use a printer extension cable so that I could plug the mouse in. The pros of this setup are it's relatively cheap and easy to build. You can put the load of the video capture on that wimpy PC you have in storage, which in turn doesn't bog your web server down. It should only take you about 35 minutes to build this web cam.

LISTING 2

Source Code for Eve.net Web Cam Page

```
<HTML>
<HEAD>
<TITLE>Web Cam @ eve, Incorporated</TITLE>
</HEAD>
<BODY BACKGROUND=
  "icons/backgrnd/newback.gif">
<H1>Here is what we are doing about now.</H1>
<HR>
<CENTER><IMG SRC=
  "http://198.77.21.49/webcam.gif"></CENTER><BR>
<CENTER>Picture is updated every 5 minutes.
</CENTER>
<P>
<HR>
<ADDRESS>eve, Incorporated<BR>
  320 36th Street<BR>
  Huntington WV 25702-1632<BR>
  Phone: +1-304-697-6770<BR>
  FAX: +1-304-697-6770<BR>
  EMail: <A HREF="mailto:webmaster@eve.net">
    webmaster@eve.net</A></ADDRESS>
</BODY>
```

Now I'm not saying this is the only way to do a web cam. I just think it has to be one of the easiest. Matter of fact, David Geller says that he is working on another version of SnapCAP that also acts a web server and another version of SnapCAP for Win95. Kudos, David; keep up the good work!

USER INTERACTION

So how do you create a HTML WebCam that allows the user to "Click on Image" to reload the web cam html image? Think back a few issues. (Insert 70's sitcom dream intro sequence here.) I couldn't remember back that far either so here it is again...

Simply put, you would put something like the following in the web cam HTML:

```
<A HREF="http://webcam.boardwatch.com/webcam.html">
<IMG SRC="http://webcam.boardwatch.com/webcam
.gif"></A>
```

The first line tells the browser to anchor the web cam HTML page to the web cam GIF image source defined in the second line. Notice the starting `<A>` tag and the closing `` tag after the GIF image. The `<A>` and `` is the anchor tag in HTML.

Now if you are using a CGI script to get the image, for example you are using the Indy WebForce, you would do something like:

```
<A HREF="http://webcam.boardwatch.com/webcam.html">
<IMG SRC="http://webcam.boardwatch.com/cgi/web-
cam"></A>
```

Now back to our regular scheduled program...

Now if you want to use something that actually installs into your PC, then Creative Labs makes a slick little board called the Video Blaster. The Video Blaster comes in several flavors: the SE100, MP400 and RT300. The ones you want for a web cam are the SE100 or the RT300. The MP400 is for MPEG playback. The SE100 would be my choice. The SE100 comes with software to capture BMP, TIFF, MMP, PCX, TGA or JPEG. As a plus both SE100 and RT100 will also capture video. The RT300 is for the serious "Home Video Producer."

I have been seeing some references in USENET about using the Video Blaster on a Linux/UNIX based system. The software that comes with the SE100 will do the web cam captures for you. As with the Snappy, you can serve that image with Win-HTTPD. It also seems that the Video Blaster is much faster at capturing that image, since it is done inside of the PC.

The Video Blaster is also TWAIN compliant like the Snappy. So it too can be used with scanner software and pull a capture straight into packages like Adobe PhotoShop. The other cool thing is that they have a nice application developer program, so expect someone to have a new webcam program written for it shortly. I will let everyone know when and where you will be able to get it from.

Drop me e-mail when you get your webcam up and running. And for next month we will continue the interactive HTML publishing by building a Web BBS. See ya on the web!

Michael
mikee@eve.net ♦

CONTACTS:

Snappy

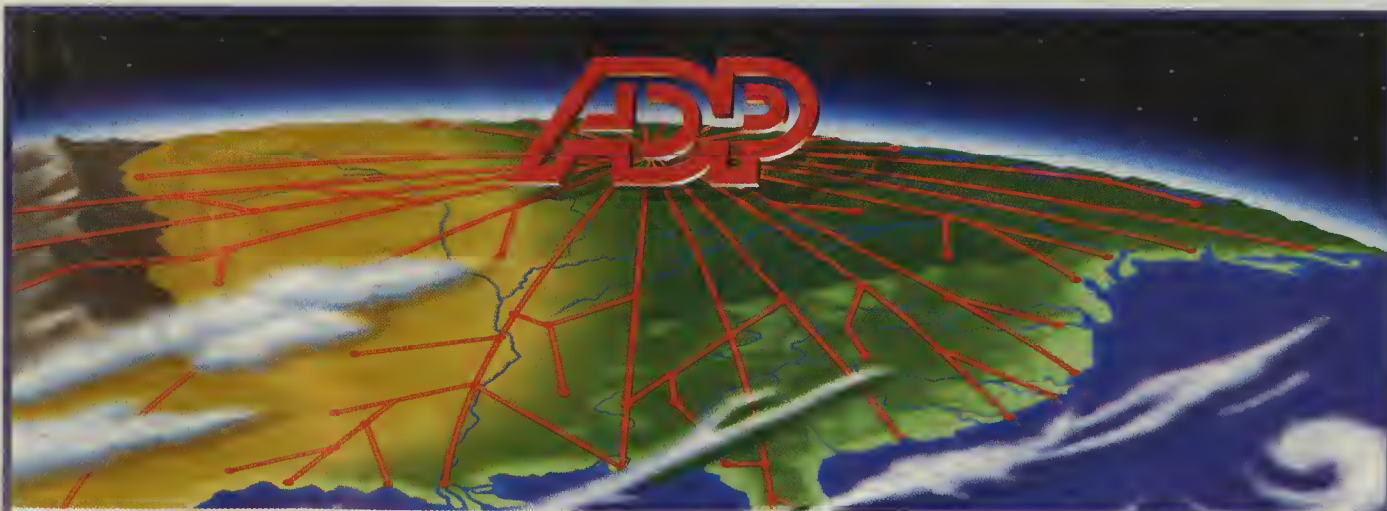
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Rancho Cordova, CA 95670
(916)851-0800 - Voice
(916)851-0801 - Fax
<http://www.play.com/>

WebForce Indy

Silicon Graphics Inc.
2171 Landings Drive
Mountain View, Ca 94043
(800)800-7441 - Voice
(415)960-3393 - Fax
<http://www.sgi.com/>

Video Blaster

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THE BOARDWATCH 100 WEB SITES LIST

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Woodworking Industry information resource
World Birthday Web registry: get birthday greetings
World Wide Mall: online department store
Writers' Source: resources & clubs for writers
Yahoo! Corp.'s Internet search engine

INTERNETICA

Born and raised in Australia, Steve Jenkins moved to Portland, Oregon with his family in 1978. He is currently owner and Webmaster of [Windows95.com](http://www.Windows95.com) at <http://www.Windows95.com> which he administers from his two-bedroom apartment in Provo, Utah. Steve has a BA in French Literature, and is currently completing a Masters degree in Business Administration from the Marriott School of Management at Brigham Young University. He lives with his wife, Kay-Dawn, and his 15 year-old turtle, Sherman. Steve works as a consultant on Internet strategy to a number of firms, is an avid Netsurfer, and is one of the founder channel operators of IRC #Win95-net. When not sitting in front of his computer being yelled at by his wife to "shut that darned machine off," he enjoys skiing, piano, karate, teaching, writing, and wishing his wife would let him back on the computer.

Steve's love of computers started in the early 80s, when he saved up enough money to buy a Commodore 64. He still argues that the C64 is one of the most powerful and user-friendly systems to date.

WIN95 COMMUNICATIONS by Steve Jenkins

WINGATE: USING WIN95 AS AN INTERNET GATEWAY

As small LANs of Windows 95 machines pop up around offices, college dorm rooms, and basements of die-hard Net junkies, users have been searching for a way to connect multiple Win95 clients to the Internet with only one physical connection. Microsoft's official response to this request was simple: get Windows NT. Windows 95 is not designed to act as an Internet gateway or router — but there is a way to cheat a little.

A bright young New Zealander by the name of Adrien de Croy has developed **WinGate** — an application that allows you to configure one Windows 95 machine as an Internet gateway, and then set up other Win95 clients on a peer-to-peer LAN to use the gateway as a proxy server. This allows multiple users to access the Internet using only one dial-up modem connection. Pretty slick in my opinion.

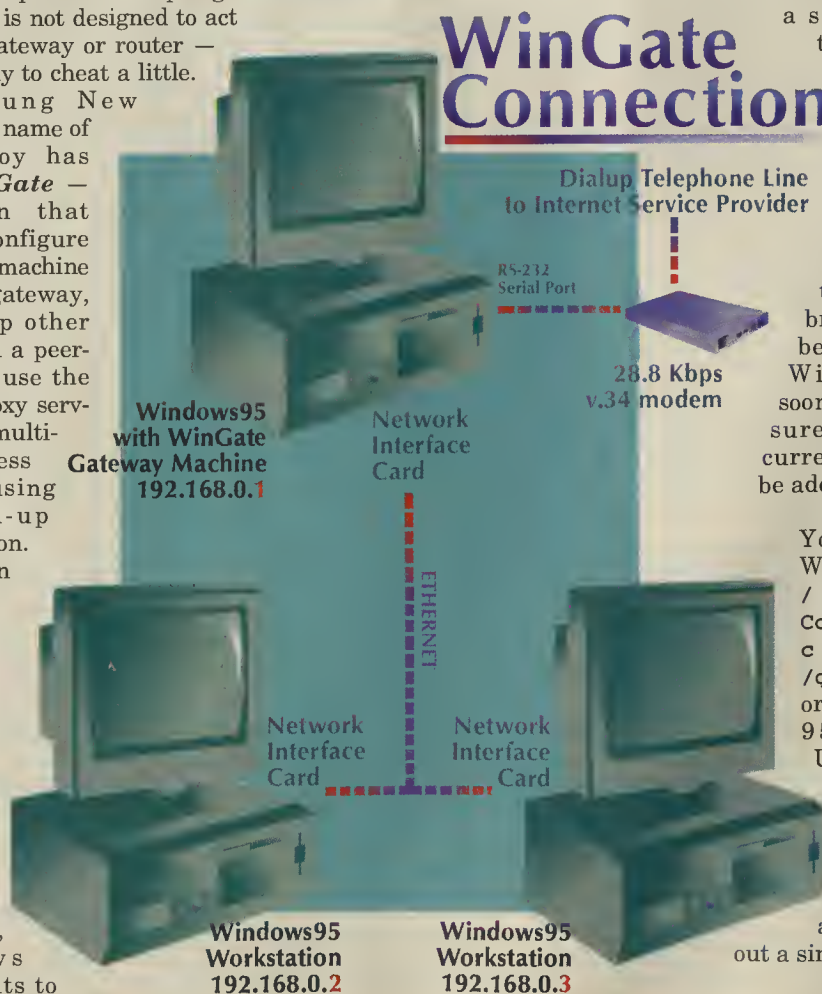
WHAT IS WINGATE?

Basically, WinGate is what's known as a "multiple proxy server." It also acts as a Telnet and FTP server, which allows connected clients to

connect to the gateway, while the gateway accesses the remote Net resource. It allows you to access Email, browse the World Wide Web, use FTP, read newsgroups, Telnet, use WAIS, and access other Internet resources. WinGate has its limitations, however. It will not work with

a serial port connection. You must have network cards installed in each of the machines to make the connection work. Also, certain protocols aren't accessible through a Web browser. There will be a new version of WinGate released soon, however, and I'm sure that some of the current limitations will be addressed.

You can download WinGate from <http://nz.com/NZ/Commerce/creative/cgi/special/qbik/wingate.htm>, or from the Windows 95.com Network Utilities Shareware Page at <http://www.Windows95.com/apps/netutils.html>. For now, registration is free, as long as you fill out a simple online form.



Once you have the WinGate software, make sure you also have the following:

- One computer with a working dial-up connection to an Internet Service Provider
- At least one other computer to connect to the first machine
- A network adapter for each machine
- Properly terminated network cable connecting each machine

There are two main parts to setting up a WinGate connection. First, you have to configure the Gateway machine (the one with the modem), then you need to configure the Workstation machines (the ones connected to the gateway with network cards and cable). The WinGate software runs only on the Gateway machine. After setting up the Gateway machine, you must configure the Internet applications on the workstations to use proxies. We'll start by setting up the Gateway.

CONFIGURING THE GATEWAY MACHINE

Installing the Network Adapter in the Gateway Machine

Power down your machine and install the network adapter card according to the instructions provided by the manufacturer. Don't install any software drivers for the adapter — there's a good chance that Windows 95 will auto-configure the adapter when you turn on the machine. Restart Windows 95 and watch to see if it auto-configures (you'll see a message telling you what it is doing and it will reboot).

If it doesn't auto-configure your network adapter, press the **Start** button, select **Settings**, then **Control Panel**. Double-click the **Add New Hardware** icon. Follow the prompts and Windows 95 will install your adapter and reboot.

Since you already had a working dial-up connection on the Gateway machine (and therefore, already had TCP/IP installed) Windows 95 created a second set of TCP/IP properties uniquely for your Network Adapter. To check this, press the **Start** button, select **Settings**, then **Control Panel**. Double-click the **Network** icon.

You'll see the **Network Configuration** dialog box. Notice that the both the dial-up adapter and the network adapter have their own TCP/IP properties. If you only have one set of TCP/IP properties listed, add another TCP/IP protocol — it will be assigned by default to the network adapter.

Installing WinGate on the Gateway Machine

Simply run the setup program provided with WinGate and choose the option at the end of the install that asks you if you want to "set up WinGate now."

First, you'll be asked to enter the **SMTP hostname** (the mail server) for your Internet Service Provider. This will usually be something like `mail.provider.com`.

Next, you'll be asked for the **POP3 hostname** for your ISP. In most cases, this is usually the same as the SMTP address.

Finally, you'll be asked to enter your **ISP's news server's hostname**. This will most likely be something like `news.provider.com`.

After entering that information, WinGate will inform you that the installation is complete!

Configuring TCP/IP Settings on the Gateway Machine

Because of the way WinGate works, you'll need to assign some "bogus" IP addresses to each of the machines on your LAN, including the Gateway machine.

In the **Network Configuration** dialog box, select the TCP/IP protocol that is assigned to your physical network adapter, not your dial-up adapter. Press the **Properties** button. You should get the **TCP/IP Properties** box. See **Figure 1**.

In the **IP Address** tab, select the **Specify an IP address** option. Then type in `192.168.0.1` as the IP address. This is a private address that won't exist anywhere on the Internet, so you can let the Gateway machine use it for the internal LAN only. Next, fill in the **Subnet Mask** text area with `255.255.255.0`.

In the **DNS Configuration** tab (**Figure 2**), select the **Enable DNS** option. Enter your user name in the **Host** box. In the **Domain**, put in the name of your provider, like `netprovider.com`.

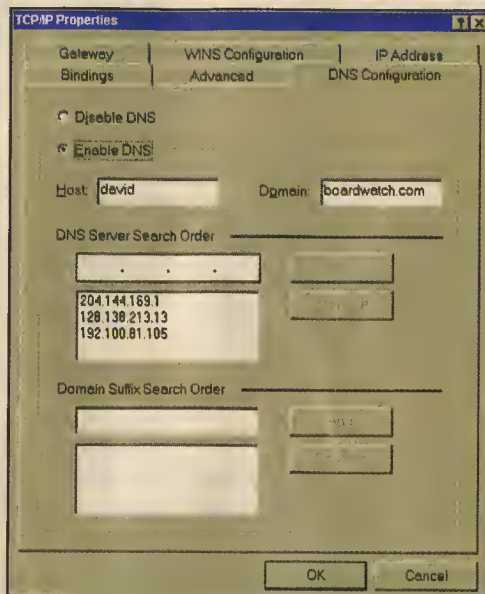


Figure 2:
Configuring Gateway DNS

In the **DNS Server Search Order** section, put in the IP address of your provider's name server and press the **Add** button.

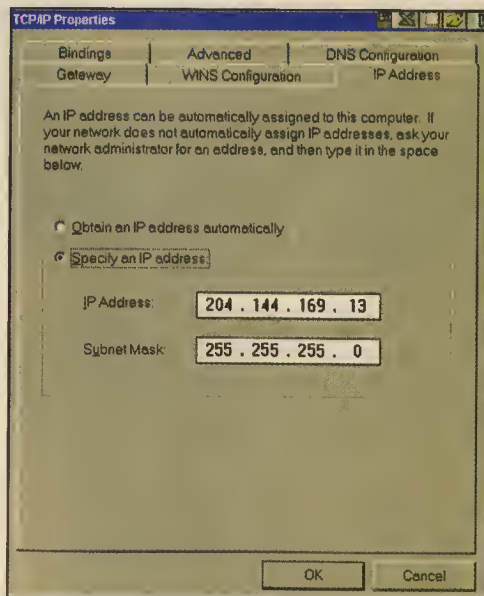


Figure 1:
Setting Gateway IP Address

In the **Domain Suffix Search Order** section, type in the domain suffix (usually the same as the domain) and press the **Add** button.

When you're all done setting these options, press the **OK** button. Then press the **OK** button in the **Network** dialog box. Windows 95 will ask you to reboot. Once

it's rebooted, your Gateway machine is configured! You can now work on the Workstations.

CONFIGURING THE WORKSTATIONS

Remove Workstation Dial-up Adapter

Because the Internet connection information for the Workstations will be routed to their physical network adapter, you need to make sure that you're not trying to configure the dial-up adapter for this machine. The only machine that uses a dial-up adapter (and therefore a modem) in this setup is the Gateway machine. You can use only one Workstation, or many. Simply follow these instructions to set up each of them.

Open the **Network** dialog box in the **Control Panel**. If you see the **Dial-up Adapter** listed, select it and press **Remove**. You'll be setting up the machine's network adapter in the next step.

Install Workstation Network Adapter

Install the hardware adapter following the same directions as you did for the Gateway machine. Connect your network cables and make sure that they are properly terminated. You cannot simply connect one end of an Ethernet cable to the Gateway machine, and the other to the Workstation. The least expensive option is to use coaxial cable and "T-connectors" with terminators on one end of the T-connector at both "end" machines in your LAN.

Install Workstation TCP/IP

Open the **Network** dialog box. To install TCP/IP, hit the **Add** button, double-click **Protocol**, then select **Microsoft**, then **TCP/IP**, and hit **OK**. See **Figure 3**.

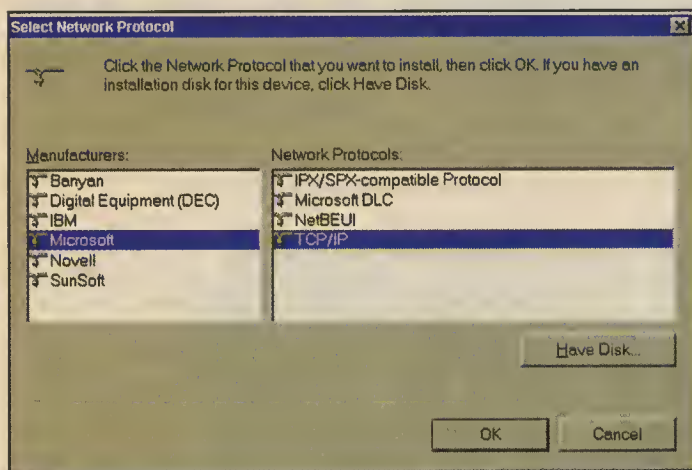


Figure 3: Installing Workstation TCP/IP

Note: Make sure that your network adapter and TCP/IP are the only items listed in your network components list. If other protocols or services exist, remove them.

As stated before, you'll need to assign some "bogus" IP addresses to each of the machines on your LAN. Since you've already given a bogus IP address to the Gateway machine, you'll need to provide unique IP addresses in the same subnet to the Workstations on the LAN. If you don't know what that means, don't worry. Just number all your LAN workstations

consecutively, starting from 192.168.0.2, then 192.168.0.3 and so on. For example, since you used 192.168.0.1 for the Gateway machine, use 192.168.0.2 for the first Workstation, 192.168.0.3 for the second, etc. Make sure you choose a different "fake" IP address for each machine, and remember which number you chose.

On each of the Workstations, select the TCP/IP properties in the **Network** dialog box. Press the **Properties** button. In the **IP Address** tab, select the **Specify an IP address** option. Then type in the unique "fake" IP address you chose for this machine. It cannot be the same as any other machine on the LAN, including the Gateway machine. Next, fill in the **Subnet Mask** text area with 255.255.255.0.

In the **DNS Configuration** tab, select the **Disable DNS** option. Instead of using DNS for the Workstations, you'll need to set up a **HOSTS** file, explained in the next step.

Set up a Workstation HOSTS file

A **HOSTS** file acts as a local database that tells your computer where to go when it's looking for a certain address, kind of like a mini-domain name server.

Using **NOTEPAD**, create a new text file. The only entry in this file should be the IP address and name of the Gateway machine, separated by at least one space. It should look like this:

192.168.0.1 gateway

Make sure you press **ENTER** at the end of the line of text, otherwise Windows 95 may have trouble recognizing it. Save your file in the **\WINDOWS** directory with the filename **HOSTS** with no file extension (for those who care, the **HOSTS** file entries do not replace or interact with NetBIOS names in any way).

TEST THE LAN'S TCP/IP CONNECTION

Fire up all the machines, including the Gateway machine. Do not dial your Internet Service Provider yet; you still have a couple more things to set up. However, now is a good time to make sure that everything is working smoothly up to this point.

From the Windows 95 command prompt, type **ping gateway** from each of your Workstations. If you get a response back, then the TCP/IP connection between the machines is working. If you get a **Request timed out** message, or a **Bad IP Address** response, check your physical connection between the machines, then go back and check all previous steps.

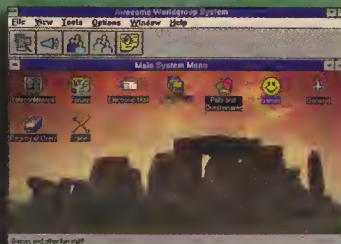
Once the Gateway machine replies to pings from each of the Workstations, go on to the next step.

CONFIGURE THE WORKSTATIONS' INTERNET SOFTWARE TO USE PROXIES

Proxies allow one computer connected to the Internet to serve as the "middle-man" between the Internet and machines connected across a LAN. Organizations using security firewalls make use of proxies to allow machines on their LANs to use the Internet, while reducing the risk of outside users being able to access the LAN. This is much like how proxies work with the WinGate setup as well.

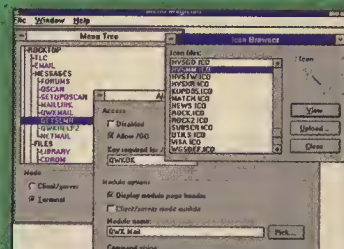
You'll need to set up proxy information in each Internet application that you run on each Workstation. Basically, apps that

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support proxies ask for the name of the proxy server (in this case, you've defined it as **gateway**) and the "port" to which they have to connect. Different kinds of Internet resources use different ports for communication, so port numbers will differ depending on which type of application you plan on using. Following is a list of Internet services and the ports that are reserved for their use:

Default Ports Used By Internet Services

Service	Port#	Description
FTP	21	File Transfer Protocol
Telnet	23	For Logging into an Account on a Remote Host
SMTP	25	For Sending Mail
Gopher	70	Text Menu-based Browser
HTTP	80	WWW — Internet Explorer, Netscape, Mosaic
POP3	110	For Downloading Mail
NNTP	119	Internet Newsgroups

By default, WinGate is set up to use the above port numbers for each of the corresponding services. In most cases, this will work just fine. All you need to do is "point" your Internet applications to the right port on the Gateway machine running WinGate. If you have trouble with the proxy information, try using the bogus IP address you set up for the Gateway machine rather than the machine name **gateway** when asked for the hostname of the proxy server in your Internet applications.

Following are instructions for setting up proxies for most popular Internet applications:

Netscape

In versions earlier than 2.0, go to **Options, Preferences, Proxies**. In versions 2.0 and beyond, select **Options, Network**, then select the **Proxies** tab. Fill in the following information in the fields it requests:

FTP Proxy: gateway Port: 80
 Gopher Proxy: gateway Port: 80
 HTTP Proxy: gateway Port: 80
 Security Proxy: gateway Port: 80
 WAIS Proxy: gateway Port: 80

With the current version of WinGate, only the HTTP proxy will operate in Netscape. All others will return a Protocol Not Supported error message if you request a non-HTTP URL.

Microsoft Internet Explorer

Go to the **Control Panel** and double-click the **Internet** icon. Select the **Advanced** tab, and select **Use Proxy Server**. Enter **gateway;80** in the Use Proxy Server window. Make sure you separate the port information from the gateway with a comma. Don't worry about the **Bypass proxy on setting** — that's used only when accessing Internet resources that are on your LAN.

WS_FTP

Go to **Options, Session Options**, and select **Use Firewall**. Choose **Save as Default**, and exit the Options dialog. For each FTP session name you create, select **Advanced** and enter **gateway** for the **Firewall** field and **21** as the port. Make sure you select the **User with no logon** option.

Telnet Clients

Since telnet is inherently a command-line based service, there is no special setup for the telnet client. To use it, however, you must first telnet to the Gateway machine (you can use its IP address). You will then be presented with a prompt like this:

```
telnet-gateway>
```

Simply type in the name of the host you wish to connect to, and optionally a port number as well. WinGate will display **Connecting to ******. When you receive a **Connected** message, you're connected to the remote host.

Mail Clients

In your mail client, set your SMTP server (sometimes called your mail relay host) to **gateway**. Set your POP3 server (sometimes called mail server) to **gateway**. If you are using **PC Eudora**, set your POP account to **your.user name@gateway**.

News Readers

Set your NNTP server (sometimes called your news server) to **gateway**.

GETTING CONNECTED

Now everything should be ready to go! Start your dial-up connection on your Gateway machine, and then start up WinGate on the Gateway machine **ONLY** (you could put WinGate in your Startup directory if you wish).

Fire up the Workstations and try using some Internet apps. If they aren't working correctly, but you're sure they can access the Gateway (you can ping the gateway), double check the proxy settings for the apps you are trying to use.

FINAL NOTES

The nature of this connection is highly experimental, and therefore, you can guarantee that Microsoft will not support it. If you have support questions concerning WinGate, you should register the software and direct your support questions to Qbik Software. For more information about features and/or options with WinGate, please refer to the WinGate documentation included with the software, or access the online WinGate Help Index at <http://nz.com/NZ/Commerce/creative-cgi/special/qbik/wghelp.htm>. ♦

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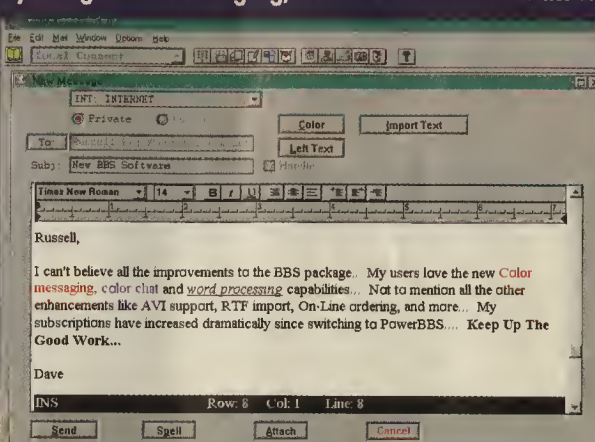
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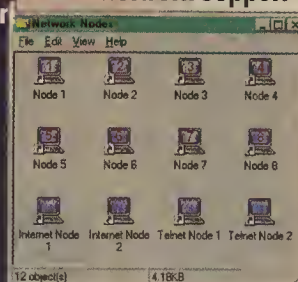
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Data compiled from reputable sources, November, 1995.

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DR. BOB

by Bob Rankin

YOU CAN'T MAKE UP THIS STUFF! INTERVIEW WITH RANDY CASSINGHAM

Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of *The Internet TourBus* and author of "Accessing The Internet By E-Mail", which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to BobRankin@MHV.net or visit him on the web at <http://csbh.mhv.net/~bobrankin>

The truth sometimes hurts, but when it crosses the line to downright funny, that's when Randy Cassingham swings into action. Cassingham, a 30-something resident of Pasadena California, took his hobby of clipping offbeat newspaper articles online and has attracted quite a crowd in the process. Thousands of Internet users seeking relief from seriousness subscribe to *This Is True*, a free weekly mailing list in which Cassingham summarizes and comments on humorous news stories from around the world. Here's a sample:

"If It's For Me, I'm Not In." Zach Williams, 18, was robbed in Chattanooga, Tenn. He tried to run away and was shot to death. One of the things the robbers stole: his pager. Police, upon learning about the beeper, figured "Why not?" and sent it a page. When the murderers returned the cops' call, it was traced to George Morgan, 19, and his cousin Antonio Morgan, 18, who were arrested and charged with murder. (AP) ...*Bit by bit, Darwin is being proved right.*



Inquiring minds want to know the true story behind *This is True*, Cassingham's new book *Deputy Kills Man With Hammer*, and what it's like to have a global virtual audience, so here are some excerpts from my recent chat with Randy Cassingham.

DOC: Randy, what motivated you to start publishing *This Is True*?

RC: It grew out of a hobby — I've been clipping weird articles for many years, and writing comments on them. As my local friends moved away, they lamented the loss of reading these on my bulletin board (cork, that is, not a BBS). I started mailing them out, but that got old really fast, so I switched to e-mail. Even that got out of hand quickly, so I re-thought the whole idea and came up with the format it's in now: a weekly column.

Like a lot of writers, I've always wanted to do it full time, but it's a tough business to break into. I figured that making it "professional" from the outset, and making it available on the Internet, would very quickly let me know if it would create a demand — a following. It did; at the end of the first year, I had an

estimated 100,000 readers per week, in 80 countries. Currently, it's in the 150,000 range, and 88 countries that I know of.

DOC: How do you get the material for *TRUE*?

RC: I read - a lot! Luckily, I can skim quite well. Really, since I have a journalism background, I have a knack for knowing if a story has a good possibility by reading the headline. Some are quite obvious — "Man Claims He Was Sleepwalking When He Shot Wife", for instance — but others may not be. "Man Sentenced to 35 Years" is a tip-off for me: why does some guy rate a story with a big headline? So then I check the article to see what the deal is. Sometimes, the answer is surprising, and that's just the kind of story I need.

DOC: Do you want people to send you funny stories they find?

RC: No. About half the time I already have the story, and I feel guilty if someone takes the time and effort to send me something I don't need. The other half of the time, the story is either YEARS old, or it's an

"urban legend" that's been going around on the Net for years. Some of them are extremely funny, but my column is called "This is True", not "This is a Funny Story That May or May Not be True."

Bottom line, what I tell my readers is, e-mail me if you've found a good story and ask if I have it; if not, I need you to mail it to me, with the date intact. I only want something if it's VERY recent, and then only if it's in a "legitimate" publication. I don't want any space alien abduction stories unless they're from the Washington Post.

DOC: *Is TRUE your only business or just a sideline? How much of your time does it consume?*

RC: It consumes WAY too much time! About 30-40 hours a week right now. If I had time, I'd do more — too much is slipping between the cracks that I should do, but I like to get a little sleep now and then. The problem is I still have a day job. I'm an information system designer and process engineer during the day, but I plan to make the jump to TRUE full-time sometime in 1996. Maybe I'll move in with Scott Adams — I hear he needs a roommate now that Pac Bell asked him to leave when "Dilbert" got successful.

DOC: *Ah, the Day Job Syndrome! Do you mind telling me approximately how much money you're making with this bootstrap enterprise?*

RC: Yes. Right now, it's very much in the red — five figures, in fact. But I know there is good potential here, and I think it's worth the risk.

DOC: *You've got a great product and a huge online readership. I'd be surprised if print publications weren't knocking down your door. What do you charge newspapers and magazines to run TRUE, and how many takers so far?*

RC: They are in fact coming to me, and I'm only just now starting to strategize with a marketing professional to work out our campaign to sign up enough publications so I can quit my day job and still pay the rent. The humor feature market, which includes cartoons as well as columns, is very competitive — which is why I'm working in a different way to stand out from the crowd.

And with paper prices going through the roof, magazines and newspapers are trying to cut costs wherever they can.

So it's tough, but I am getting customers — and the Internet is helping me find them all over the world. The fee is based on the size of the publication's circulation and how often and how much they use, and starts at just \$15 per week since I want to encourage smaller publications to carry it — a market that the larger syndicators tend to ignore. It pays off: one of my first newspapers was a 2500-circulation weekly on the Alaska Highway in the middle of Canada. Obviously, for larger publications it goes a bit higher.

DOC: *How long have you been wired, and what was your motivation for going online with TRUE?*

RC: I first started using computers in about 1971, on a Model 33 teletype connected to an HP-2000C over a 110-baud acoustic coupler modem. My own first modem, a 300 baud direct connect, came along in 1983. I've always been comfortable with computers — but for me, they're a tool, not a social be-all and end-all. I don't understand writers who say they can't write unless they're using a pen on a yellow pad; I can't handwrite worth a damn, and it's too slow! I use a Dvorak keyboard for that reason. I could never get over 50-55 wpm on Qwerty, but I run over 100 wpm on Dvorak, and it's easier. For a writer, output is money; I can get my output out about twice as fast now: what's that worth?

*"Information is NOT
free. Someone took time
to create it, and they
probably want to eat and
pay the rent." ♦*

DOC: *Speaking of worth, did you plan to offer a TRUE book right from the start or was that an afterthought?*

RC: Right from the start. I generate a lot of text with TRUE — more than fits in the column — so there'll be a new one every year. I like books; you can hold them in your hand, take them anywhere, curl up with them in bed or bath, share them easily, skim, skip around, and they make cheap gifts. But searching for That Story You Liked So You Can Show Someone is tough — I have a hard time finding "that" story, and I wrote the thing!

DOC: *Randy, you're pretty adamant in your copyright statement about unauthorized redistribution of TRUE. Tell me why.*

RC: There are a few reasons I'm adamant. The saying goes "Information wants to be free" on the Internet. I want to encourage that — I allow free forwarding — but I want people to remember that information is NOT free. Someone took time to create it, and they probably want to eat and pay the rent. Second, since I'm trying to create a following to help me sell the column to newspapers, I need to have an idea as to how many people are following it! So while I'm pretty free about letting BBSs carry TRUE to help attract subscribers to their services, I demand some statistics in exchange that I can use in my marketing. I can tell them that right now, for instance, there are 108 licensed BBSs carrying TRUE. Third, because I am selling it to newspapers and such, I need the copyright on there so that they don't just steal it — I want to eat and pay rent!

DOC: *Since your material comes from copyrighted media sources, isn't TRUE itself a violation of copyright laws?*

RC: Not at all. Fact cannot be copyrighted; it's the EXPRESSION of the fact that can be. I NEVER copy the articles; I rewrite them into my own style. I have to, and not just for copyright reasons: I want everything to be in my "voice," since that's what people are paying for, and also it's quite a bit of work to condense a 400-word story into 40 words, and still get the point across. So someone can, for instance, take the IDEAS out of my stories and, say, write a screenplay based on it, and I have no claim to it — nor would I want to have a claim on it. In fact, there is already a Hollywood screenwriting group subscribed to TRUE, and I think that's great. All I ask is an autographed copy of the script!

DOC: *I understand you have some strong opinions about the Dvorak keyboard layout. Tell me more...*

RC: I think it's pathetic that we still teach kids Qwerty when they could learn Dvorak in half the time, and then get on with what they're learning to type for: writing... programming... CREATING. What's the point in drilling a-s-d-f j-k-l-; when you could be drilling WORDS, and for a shorter amount of time? The only drawback is having two

user populations — it's tough to have a typewriter with both Dvorak and Qwerty keyboards on them. But on a computer it's trivial. I don't harp on Dvorak — I've only mentioned it once or twice online, and not at all in my book — but it's a great tool I use to be more successful.

DOC: *Has publishing TRUE brought any unexpected opportunities your way?*

RC: I get a lot of e-mail from people, and about 99% of it is positive. And it comes from all over the world. I get an average of 200 messages a day, and once I got 500. I do read it all, but obviously can't answer it all. As far as "opportunity" goes, TRUE is appearing in magazines in places that a normal syndicator probably wouldn't have taken it: a Swedish magazine, a small town Canadian newspaper, and I'm in negotiation with magazines in Russia and Slovakia. And, of course, a number of American publications, most of which don't normally use syndicators.

DOC: *Any unpleasant surprises?*

RC: Not too many, actually. I do get the occasional hate e-mail from people who don't like a story, or don't like my poking fun at their pet issue. I'm not terribly Politically Correct: I'll laugh at most anything, though I certainly have my limits. Usually, though, people that are the most upset didn't understand what I was saying; when I ask them to re-read the story, and take their blinders off, most of them come back later and say "Oh! You weren't making FUN of that lady in the wheelchair, you were SUPPORTING her!" and they go away happy. But no one can appeal to everyone, and TRUE has gotten bigger EVERY SINGLE DAY since the first day when I sent it to 50 friends with e-mail, so I guess I'm mostly on track.

"You need clips of published material to get published. But the Internet gives writers another outlet." ♦

DOC: *What's the toughest thing about getting into print, and can you offer any words of advice to other aspiring syndicators?*

CONNECTING WITH RANDY CASSINGHAM



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RC: First, it helps to know the business — for instance, knowing that publishers are facing huge problems with paper prices right now means you can anticipate their questions, and have answers ready. But more, everyone thinks they can write because it's something we all learned in school. But we all learned to fingerprint also, and you don't find too many people making a living as illustrators. So you have a lot of people trying to break into print because it is, after all, pretty cool. But it doesn't take long before they start to realize that it's a lot of WORK, and they drop out and get a real job, like Dad said they should.

So editors are wary of writers: is this person someone who will stick with it and deliver week after week, or just another "wannabe?" My advice is to write and write and write, and PROVE that you can turn out a quality product week after week after week. When you have a track record, a lot of clips, or a book or two, editors can respect that and they'll be much more likely to give you a chance.

This used to be Catch-22 advice: you need clips of published material to get published. But the Internet gives writers another outlet, a place to put their stuff out to the world. If you get two

subscribers — your mom and your sister — you might get the hint that this isn't for you. But if the world beats a path to your door, there will be editors standing in that line too.

DOC: *What's your absolute favorite TRUE headline?*

RC: The first year, it was "Deputy Kills Man With Hammer" (upon which I commented, "Didn't want to waste a bullet"). It was just so strange that it really stayed with me. So it HAD to be the title of the first book, and it is. Next year's title will probably be "Glow in the Dark Plants Could Help Farmers," unless something better comes along in the next few months — but that one will be hard to beat. You gotta love this job! ♦

George: ...And they do!

Doc: So you've been involved in Fidonet for a long time — tell me a bit about how you got into that and what you did with Fidonet.

George: When I came into Harrisburg, I was looking for ways to keep in touch with friends out in California — I ran into a very, very helpful BBS operator here in town who had just discovered something called *Opus*. He talked me through installing this amazing new software that had some sort of a weird mailer front end on it, and I decided to start playing with it.

My background involves [writing] BBSing software — I started out doing coding on CP/M with the Bye program. That's what we used to use back then where you sat with your two 90K floppy drives waiting for the phone to ring and hooking up the acoustic coupler on your 300 baud modem.

George Peace: from Fidonet to the Internet

George Peace is a rare bird — a success by any measure in the online world. George has turned his passion and hobby into a career by putting himself in the back seat. I see him as the kind of guy who loses sleep wondering if he did enough after spending an hour on the phone trying to help a neophyte user get the hang of bit and baud.

Outside of Harrisburg PA, where George has operated *Pennsylvania Online* for over a decade, he is perhaps best known for his involvement in Fidonet — culminating in his position as International Coordinator. But Peace is waging battle on a new front now — the Internet.

Since wiring his BBS to the Internet in the fall of 1994, George has seen the Internet portion of his business grow to the point where he found it essential to leave his 9 to 5 job at Unisys to work full-time as sysop. *Pennsylvania Online* is now a unique venture that combines elements of traditional BBS, Fidonet and Internet technologies.

I spent a pleasant afternoon chatting with George about the origins of his online habit, some recent doings, and his take on the future of the BBS. Here's a portion of our conversation...

Doc: George, tell me a little bit about *Pennsylvania Online* to start things off.

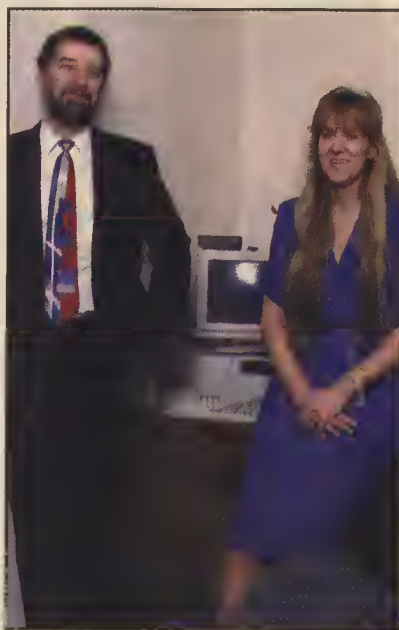
George: I guess *Pennsylvania Online* is like the little engine that could. History wise, we opened up our doors back in 1984, when I transferred into Harrisburg on a computer assignment. I had just come off an assignment at Jet Propulsion Labs in California, and started the BBS partly as a way to communicate with friends out there. It grew and grew from one line on an Osborne to over 40 lines now on 10 PCs.

Doc: How do you see the BBS adding something to an ISP's business — does it help in terms of support, in maintaining the community aspect, or something else?

George: Well, it does two things. [First,] it gives users who just aren't interested in Internet a place to go. It also offers an alternative for local chats — Internet tends to be so global, so impersonal. It's kinda nice sometimes just to log on and talk to folks who share your common social interests.

[Second,] the BBS also brings a ready and willing customer base to the Internet world; people are constantly upgrading. It's important that folks be happy with the BBS before moving to what traditionally is a higher-priced service. And being in business as a BBS operator in the local area for 11 years puts one at a bit of an advantage over what we sometimes call the competition.

Doc: Sure, anyone can buy a Pentium and hook it up to a T-1...



George and Christine

It was the *Opus* program that allowed me to access Fidonet. I started picking up echomail at 2400 baud from some folks in Dallas, met some folks along the way — some of whom have come and gone, folks like Tom Jennings, Randy Bush and Bob Hartman — big names in Fidonet over the years. I guess back in around 1990 I took on responsibility for being a Regional Coordinator in Fidonet, then a couple years later I took on the position of National Coordinator, and then in 1994 I became the International Coordinator.

Doc: What's involved in being a Fidonet Coordinator?

George: Well basically, to quote Tom Jennings, it's the never-ending and fruitless job of herding cats! Fidonet is the kind of organization that a lot of people try to direct, and never really feel fulfilled. It grows in its own direction and when it wants to make a turn or circle around you, it does just that.

The only significant things that a Coordinator can do, especially at the higher levels, are first to collect the nodelist updates (which allow Fidonet to be the largest continuously updated and absolutely correct BBS list in the world) and the arbitration or mediation — trying to get 2 sysops who are saying the same thing using different words to realize that's exactly what they're doing.

We all share the same common interest and that's communication. That's really why Fidonet has been so phenomenally successful.

Doc: Do you see interest in Fidonet waning with the rise in Internet mania?

George: I do believe the increase in Fidonet growth is leveling off somewhat, partially due to the increased interest in Internet. I see an awful lot of the same names out on the Internet that I see in Fidonet. Fidonet seems in some sense to be a training ground for Internet.

We're seeing the sysops moving over [to the Internet], and I think that in the BBSing business, people are seeing more and more that in order to stay afloat they have to offer new

value to their users, whether it be Internet e-mail (a very popular item on many BBSs) all the way to FTP and telnet. Many of them will go ahead and throw a T1 online and become an ISP. All of that value, that's the real Internet to a BBS operator and to their users.

Doc: *So is the BBS operator in many ways uniquely qualified to move a group of users from that world into the Internet?*

**"In order to stay afloat they
(BBS sysops) have to offer new value
to their users"**

George: They sure are. They're accustomed to dealing with novice users, who have just opened the box on a shiny new computer or modem and are just tickled to death and ready to go out and conquer the world. They have the patience and the understanding to know what those feelings are all about, and to carry those folks on to connectivity.

I think that's always been one of the big rewards that a sysop is looking for, is the teaching and nurturing of that growth for end users. And that's something that I think is a cold reality of many ISPs that enter the biz with a single goal of making a great deal of money in a short period of time. They've lost the human factor of learning and enjoying.

When the very first thing that I hear out of someone's mouth is "Oh, that idiot user!" those are the people I don't want to be associated with. I believe that in order to achieve real success, you've got to be motivated by the reward of watching people smile.

Doc: *Tell me about the rates and services you offer.*

George: We have several different services. As far as traditional PPP/SLIP access, we were one of the early users of eSoft's IPAD product and we're offering rates that range from \$9.95 a month for 50 hours of casual Internet access on up to \$25 and beyond for super surfers.

Doc: *That would be more or less unlimited access?*

George: It's flat rate access. We're all trying to stay away from using the term "unlimited" right now because it's unachievable and unenforceable. There are other services that we provide here, one of which is the FTPHub that I started back in the middle of 1994. When I started it, it was one of those "gee whiz" merger ideas between Fidonet and Internet technologies that started as a service and is now a part of the business.

We were all getting very tired of passing increasing amounts of Fidonet Echomail and files over telephone lines, so I thought it would be a remarkable idea to start transporting some of that Fidonet information over Internet. I started out on a 28.8 line and very quickly had to move to a T1. Right now, we're shipping content to places like Croatia, Korea, Hong Kong, Australia and Brazil — places that previously just couldn't get access to Fidonet technology and content.

Suddenly everything that we have in North America is available to the entire world over Internet at essentially flat rates, instead of calling halfway around the world and sponsoring the phone company's growth.

Doc: *How many users have subscribed to the FTPHub service, and what's the cost?*

George: We're approaching 200 users, and we charge a flat rate of \$30 a month for all they can take. We did some analysis and decided that we couldn't afford to do it for less than \$40 a month, so I picked \$30. I think Fidonet is about sharing — I certainly couldn't afford the T1 if I was giving it away, so I picked a number kind of in the middle that I'd be comfortable paying myself.

Doc: *And that makes it work, doesn't it? Any other interesting services?*

George: Well, once I got involved as an ISP, I realized that you had to run a news server in order to be a competitive force in the local market. And after I put up my news server, I realized that there were a lot of other people like me out there who were excited about becoming an ISP, but they didn't particularly want to spend the money or the time required to care for and feed a UNIX system. So I started a commercial news server where dozens of ISPs from around North America come to us for their USENET service.

Doc: *What type of ISP would be interested in that service?*

George: Basically it would be what I would refer to as a local ISP — a single location just starting out with perhaps 8 or 16 phone lines — who wants to make a dent in the local Internet market. Primarily these are sysops who are just getting into Internet, some on a limited budget and some who just don't want to hassle with setting up a UNIX system onsite.

Doc: *So you charge on a site basis?*

George: We charge by number of lines, with rates that start at \$75 a month. It's a whole lot less than spending \$14,000 on a news server.

Sometimes I'm a little embarrassed about all this stuff. I don't toot my horn well. I'm very uncomfortable talking about it because I'm the kind of person that likes to sit in the back row and watch everybody smile as they grow. People keep telling me "George, you're doing some interesting stuff — you have to get out there and tell people." It's a difficult situation for me.

Doc: *I understand you recently left Unisys because you couldn't afford to work there any longer.*

George: I left Unisys for reasons that include the business that I just can't be away from. It's done so well — my wife Christine and I are so excited about all the things that are happening that I've decided to go full time with this. I'm parting company after a very enjoyable 15 years with Unisys as a systems programmer and project manager. It's going to be difficult for me to speak of that in the past tense.

Doc: *Does Christine work with you in the business?*

George: She works part time in the business. She's helped from the very early days of the BBS all the way through to now with substantial involvement in the operation of things, as well as a supportive role. Couldn't ask for better!

Doc: *There's the support role, and then there's the supportive role...*

George: Yes — and she fills both shoes! It's been very good.

Doc: *How many customers do you have with Pennsylvania Online?*

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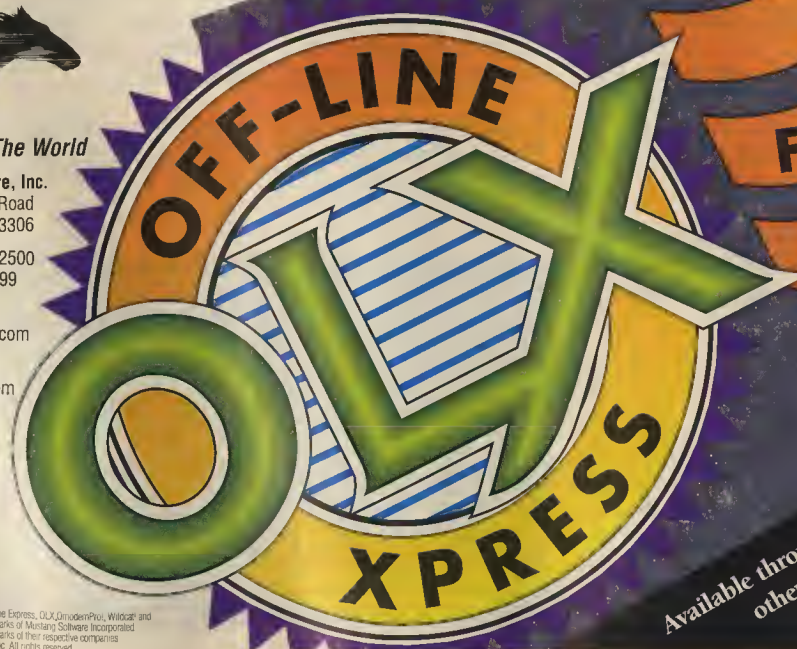
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George: We have about 6000 names in our user base, and several hundred are actual subscribers to the Internet service.

Doc: *Tell me why you bought your first modem.*

George: It was because all my friends had modems! (chuckle) When I was working at JPL I was side by side with the scientists who were doing the Voyager project, and I got caught up in their excitement. They were all using what were then state of the art TI [Texas Instruments] portables and 300 baud acoustic modems that were being used to support Voyager, so doggone it — I had to have one!

I remember my first \$500 1200 baud Hayes — I thought I had really made the grade back when I got that thing. And it even answered the phone on it's own... it was a miracle!

Back then we used what we called a ring-back system. Someone would call the BBS and let the phone ring once — that was the signal that within the next minute we had to have the computer and modem hooked up to that line. So we were always listening! That was the sysop's job — to sit by the telephone all day long and move the cords.

Doc: *Tell me how you made that jump from modem owner to BBS operator back in the early 80's.*

George: Well being a curious programmer, and perhaps not possessing the common sense to stay away from it, I got interested in what it was that made all these things work. I got a copy of the Bye program source, which went around from one programmer to another in those days, and when something new came by I had to run it to find out how it worked. I never did find that common sense that I needed to stay away from it.

But the transition was a fairly easy one — all of a sudden my little dual 90K floppy machine was spending more time as a BBS than it was as a personal workstation.

Doc: *So you kind of eased into it?*

George: Yes, very, very slowly, and in fact for the next three years I was still on an Osborne. I didn't really go to PCs until sometime in 1984. Somehow I just thought going to a PC was sacrilegious back then — it just wasn't a real computer.

Doc: *George, tell me about your non-computer interests.*

George: I love reading, traveling, spending time with my wife... which is all part of the therapy of being a BBS operator. I think I've maintained a personal life — no one has to tell me to get a life. We have no children — the PCs are our kids.

I was also involved in co-authoring a book on BBSing last year that was published by QUE called *Running the Perfect BBS*. My contributions to that were the Internet and Fidonet sections of the book.

Doc: *How would you compare the level of dialog you see on Fidonet vs. the Internet?*

George: I don't seriously see a great deal of difference between the two. Fidonet is more of a local resource to people — they view it as a local thing whereas people view Internet as a global resource. In Fidonet I get the impression that people think their mothers are watching. On USENET, they're sure that their mother doesn't know. There is a little more civility in the Fidonet side.

Doc: *Are you still doing much with Fidonet?*

George: I'm still doing the hubbing for the Fidonet mail at the North American level, and watching with great pleasure as we accomplish this great deed of moving the transport away from the telephone wires and onto the Internet wires. Between satellites and the Internet, I'd say that at least 70% of Fidonet traffic is now away from the long distance telephone carriers.

"I'd say that at least 70% of Fidonet traffic is now away from the long distance telephone carriers."

Doc: *Any online heroes, George?*

George: I think the users are really my heroes... in all sincerity. The users are what make all this worthwhile — seeing the pleasure as they communicate with the world. That makes them my heroes because they're the ones who keep us as sysops motivated to keep providing these services.

There are just so many people in Fidonet and Internet who have influenced me over the years — but I don't think there's anyone in particular who I would look at as having a profound influence on me.

Doc: *Any parting comments on the evolution of the industry, as sysops move from the BBS world to the ISP role?*

George: Every year I've said I don't know how it could get any more exciting than this — and every year, they've proved to me that it can be a LOT more exciting than last year. I think that the transition from traditional old-style BBSing to as I call it the new "online service provider" is just as exciting as it's ever been over the years. The excitement I have right now plugging in a T1 is the very same excitement I remember plugging in my first 1200 baud modem.

I think that this is a time of transition from BBS to BBS and Internet to perhaps all Internet. The large file areas on BBSs are no longer download areas, they're FTP servers now. And we're beginning to walk away from using the term BBS, which is a little too scary for some people. That's why I like to use the phrase online service provider.

We're doing the same thing, we're just changing the names. We've gotten a little faster and a little greyer, but it really is the same thing when you take off all the fluff. ♦

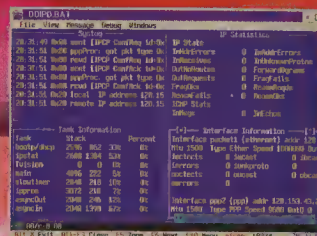
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THE COMPLEAT INTERNAUT by David Hakala

SPINNAKER: THE WEB BBS FROM SEARCHLIGHT SOFTWARE

Until quite recently, the only affordable way the average person could establish an online homestead was to start a bulletin board system (BBS). Tens of thousands of people did just that. Then along came the World Wide Web, and another inexpensive way to start an online service opened up to the masses. Now aspiring infopreneurs face a difficult choice, and they wish it would just go away.

RELATIVE STRENGTHS & WEAKNESSES

The cost of accessing a Web site is virtually zero, once one acquires the basic tools and connectivity service. (OK, so the tools cost a couple of grand, and the average cost of PPP service is about \$1.00 per hour and falling. Would you spend \$2,000 for a car that gets 1,000 miles per ounce of gas?) The Web provides a fairly standardized, multimedia presentation with a point-and-click interface – appealing to the neo-literate generation of computer users. The Web is taken seriously by the general public and corporate markets. The I-way attracts money in far larger amounts than dialup BBSs ever did.

The Web is hardly perfect or complete. It is naturally good at connecting and moving files, and at displaying pretty screens. But other applications require considerable programming to produce even half-baked results. A lot of time goes into development of features that BBSs have offered for years, including real-time interaction between users, database applications, sophisticated access control and file library management.

The Web and BBSland complement each other. A marriage of the two feature sets would be felicitous for all concerned.

TRIAL MARRIAGES OF INTERNET & BBS TECHNOLOGIES

BBS and Internet service providers have slowly groped their way towards each other for several years. First, they learned to swap mail. Then BBSs became telnettable; you could use the Internet to connect, but the interface was nothing like the Web. Today, some BBS sysops use a Web page to advertise their systems, but users have to leave their browsers and logon over dialup lines. A BBS may provide a telnet link from a Web page, but jumping from a graphically glorious web

page to an ANSI/ASCII BBS menu is a bit like driving off an asphalt highway to a gravel road.

Now we have GUI client/server systems such as Durand Communications Network's *Mindwire* offering graphical BBSs and the ability to surf to a Web site using a single Windows client program. Well, not quite; you have to link a Web browser into the Mindwire client. But once that's done, just point and click from within the client to load the browser and reach a Web site, then exit the browser to return to the BBS.

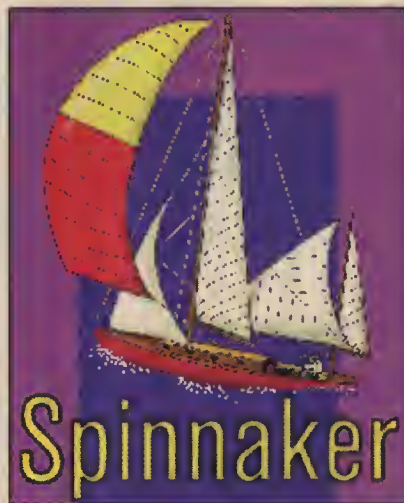
Unfortunately, client/server technology is proprietary; you need a client program specific to the type of server you plan to call. I don't want to learn Mindwire, Worldgroup, Annihilator, Genesis, TEAMate, Excalibur and a plethora of other client programs in order to freely go everywhere online. I really don't want yet another user interface; a Web browser with a telnet-capable terminal program hooked in as a helper application are quite enough.

SPINNAKER: A FRESH APPROACH

Searchlight Software has produced a fine BBS platform since 1987. The Searchlight BBS program is favored by about 5,000 sysops for its easy installation and maintenance, flexibility, high value-to-cost ratio and innovation. Searchlight was the first commercial BBS to include an ANSI text editor and sysop interface; the first to provide internal RIP graphics support and the first to make RIP graphics viewable at the sysop's console. Searchlight was also first to support an unlimited number of mes-

sages, conferences and file libraries. So it does not surprise us to see a fresh approach to the Web-BBS conundrum from founder Frank LaRosa.

The beta version of Searchlight Software's intriguing solution to users' and sysops' Web-BBS problems was released in November. The software, dubbed *Spinnaker*, combines Web server functions with message conference, file library and other BBS-like functions. Spinnaker uses the same user profile, message conference and file library databases that Searchlight BBS uses. This approach eliminates duplicate maintenance effort for the sysop. It also brings Web and dial-up users closer together. Messages or files posted from either side of the Web-BBS system can be immediately available to users



David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at BW in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at mailto:david.hakala@boardwatch.com or at (303)973-6038.

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on the other side. Real-time chat across the Web-BBS gap is also possible.

No proprietary software is required to access a Spinnaker site; any Web browser will do. In fact, the Spinnaker server software makes it easier for site administrators to accommodate multiple browsers than many other packages we've seen.

A unique CGI-DLL provides a programming interface, so developers can write applications that seamlessly integrate with the Spinnaker Web presentation. The CGI-DLL is an open standard API compatible with WIN-CGI, so existing CGI scripts will run. But CGI-DLL is more efficient than its predecessor. WIN-CGI must load an application each time a user requests it, which takes time. CGI-DLL keeps applications in memory between uses. The syops can specify a maximum number of applications that can remain in memory at one time, and CGI-DLL will unload inactive applications to make room for new ones, or after an application has remained inactive for a set period of time.

Spinnaker includes a feature set collectively called "Dynamic HTML" that permits on-the-fly creation of Web pages that change based on the user's browser attributes, security profile and other conditions. This conditional programmability makes it easier to manage HTML documents; one file can contain all the code needed to accommodate table-enabled and table-deprived browsers, for instance. Registered and unregistered users may receive entirely different views. Someone who logs on in the morning might be greeted with a cup of coffee, while a midnight caller may get a can of beer.

Dynamic HTML has three components, described in the following three subsections.

SCRIPTING

Scripting commands are read and processed by Spinnaker *before* a page is delivered to a user's browser. Scripting commands are not HTML extensions; rather, they instruct Spinnaker to generate certain types of HTML code or perform certain functions on the server. Since the user never receives or processes script commands, no special browser is required. Scripting commands include

- **Macros** are replaced each time an HTML page is accessed with information provided by the system, the user, an application program or some other source. Macros can be defined to save the HTML programmer coding time, i. e., `<$footer>` could be defined as a dozen or so lines of code to be included at the foot of every page.
- **Conditionals** select one section of HTML code in a document over another based on the result of evaluating a condition. Spinnaker supports `if/else`, `ifnot/else`, `switch/case` and `loop/while` conditions.
- **Includes** are directives that let one embed a document inside of another. The directive takes the form `<$f file-name>`. Embedded documents may be static or generated on the fly by other application programs.

MACRO APPLICATIONS

Macro Applications are Dynamic Link Libraries that define one or (usually) more macros. The macros defined by a DLL can be called in an HTML document using the syntax `<dll.symbol>` where **symbol** is the name of a macro defined by the DLL. The **SYS.DLL** is one Macro Application included with Spinnaker; it provides access to various system parameters. The code

`<sys.time>` would insert the current time of day. Other explicit **SYS.DLL** macros include date and weekday (e. g., Monday). **SYS.DLL** also includes conditional macros that return true/false evaluations: "morning," "afternoon," "evening" and "night."

The **HITCOUNT.DLL** included with Spinnaker is a cunning piece of work that can generate statistics that are more meaningful than simple page-hit counts. It is invoked by the syntax `<hitcount.text token>` where **token** is an arbitrary token name. **HITCOUNT.DLL** tracks the number of times it has been invoked with each token name, and stores the running tallies in a file named **HITCOUNT.INI**.

Suppose we wanted to track the relative popularity of our writers, based solely on the number of times any of their stories was requested from <http://www.boardwatchcom>. We could simply insert the command `<hitcount.text name1>` in the HTML versions of all of Writer 1's articles, `<hitcount.text name2>` in Writer 2's articles, etc., and let things run for a while. A look at **HITCOUNT.INI** would instantly tell us that Writer 1's articles were accessed 21 times, Writer 2's were accessed 37 times, and so on.

The **SERVINT.DLL** module provides access to server-related information. One such macro provides access to information about the user's browser; it takes the form `<servint.hfield field substring>` where **field** is the name of a field in the header record sent by a browser. The macro returns "true" if the substring is found anywhere in the specified header record field. Thus, the statement `<servint.hfield user-agent mozilla>` would be true if the user's browser is Netscape Navigator, because Netscape always includes the word "mozilla" in the **USER-AGENT** field of the header record sent by its browser.

Another macro provides access to a flexible number of sysop-defined text macros that can be defined from the server's control window, while the system is online. The syntax for this macro is `<servint.i token-name>` where **token-name** is the name assigned to a given string of text.

Two other macros take their values from the Windows directory entry for a given HTML document file. The macro `<$fileinfo date>` displays the date the file was last modified; `<$fileinfo time>` displays the time the file was modified.

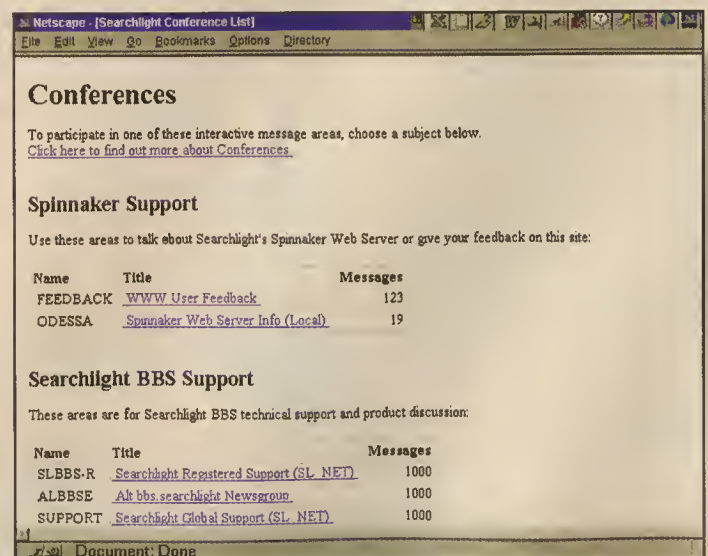


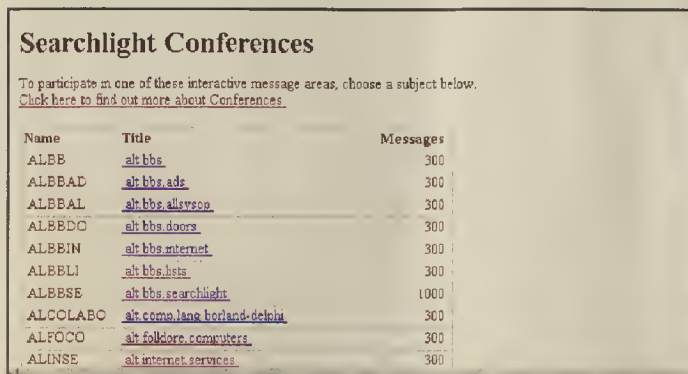
Figure 1: List of Conferences and Their URLs Automatically Generated by WebMsg

PAGE APPLICATIONS

These are the DLLs that make Spinnaker a Web BBS. They're called Page Applications because they generate entire pages of HTML code on the fly, as opposed to a few snippets intended to be part of another page. Some of the Page Applications included with Spinnaker are **WebMsg** for conferencing, **WebFile** for file libraries and **ISMAP** for image map processing.

A Page Application is invoked by requesting a URL containing the application's name and a series of parameters. The URL may be specified in a browser - `http://mysite.com/$webmsg.conf` - or as an embedded link in an HTML document, i. e., `Message Conferences...`. Either of these examples would generate a list of available conferences like the one in Figure 1.

Clicking on any of the hot links in Figure 2 will display a list of headers for the messages in the selected conference. Click on a message header to read the selected message. WebMsg extracts the message text from the message database and builds an HTML page based on a sysop-defined template. The message window (Figure 2) may include navigational links, a reply function, a search form to find other messages in the conference by keyword contained in header or body, inline graphics or any other HTML element.



Searchlight Conferences

To participate in one of these interactive message areas, choose a subject below.
[Click here to find out more about Conferences.](#)

Name	Title	Messages
ALBB	alt bbs	300
ALBBAD	alt bbs.ads	300
ALBBAL	alt bbs.altsvcn	300
ALBBDO	alt bbs.doors	300
ALBBIN	alt bbs.internet	300
ALBBLI	alt bbs.lits	300
ALBBSE	alt bbs.searchlight	1000
ALCOLABO	alt.college.horland-delnj	300
ALFOCO	alt.folklore.computers	300
ALINSE	alt.internet.services	300

Figure 2: Message Displays May Include Any HTML Elements

WebMsg can be used with Spinnaker alone to create a web site that supports public message conferencing. As of this writing, there is no Windows-based message management module for WebMsg, though one is in the works. However, that's not a fatal problem. Since WebMsg uses the Searchlight BBS message database format, all you need to set up and manage conferences is the free demo version of Searchlight BBS, available from <http://www.searchlight.com> in the files **DEMO450.ZIP** and **DOCS450.ZIP**. Use Searchlight BBS' utilities to set up and maintain your conferences.

The real value of WebMsg lies in its ability to share a message base with a multinode Searchlight BBS. This arrangement allows dial-up BBS users and Web users to share conferences, with instantaneous updating. LaRosa recommends running Spinnaker and Searchlight BBS on separate PCs that share files over a LAN. It's possible to run Spinnaker and Searchlight BBS on the same PC, but results are unpredictable.

The WebFile system works in ways similar to WebMsg. Using file library databases created and maintained with the Searchlight BBS utilities, WebFile generates library and file lists that are always perfectly synchronized with those found on the BBS. Web and dial-up users have access to exactly the same files at any moment. Web users can simply click on a file name

to download it, just as they would at an ftp site. Lists and file descriptions can be designed like any HTML page.

Other Page Applications included with Spinnaker are a chat module, user profile/security database engine, and Webversi, an interactive game that nicely demonstrates the potential of Dynamic HTML.

An all-purpose database module should be released as an optional add-on by the time you read this. It will allow Web access to "almost any kind of database" such as dBase, SQL, etc.

CONCLUSIONS

Searchlight Software continues its tradition of producing inexpensive, elegantly simple and obviously needed innovations. This time, Frank LaRosa and company have produced a powerful bridge-building toolkit, and much of the structure is prefabricated. The Spinnaker Web server and Searchlight BBS programs provide solid anchors on either side of the Web-BBS chasm. The main suspension cables bridging the gap are WebMsg, WebFile and the other included Page Applications. Dynamic HTML is a deep toolbox that lets a sysop build virtually any details desired.

There is some concern that proprietary client/server technology discourages users from exploring new online services. If calling a new system requires downloading, installing and learning a whole new client, or even just downloading several new megabytes of client-side applets and screens, users will be less inclined to give new entrants to the market a chance. The Spinnaker/Searchlight solution does not raise this barrier. Any browser or terminal program can be used to access a Spinnaker/Searchlight system; it doesn't get any more "open" than that!

There is a significant existing market for Spinnaker - the 5,000 Searchlight sysops out there. Consequently, third-party developers are already at work on CGI-DLL applications. Spinnaker and Searchlight will also find favor among first-time sysops who want to have their Web and dial it too. ♦

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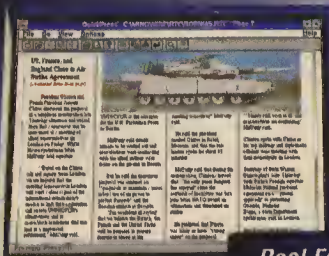


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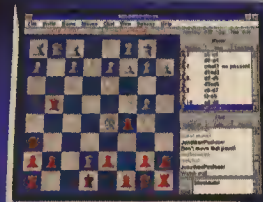
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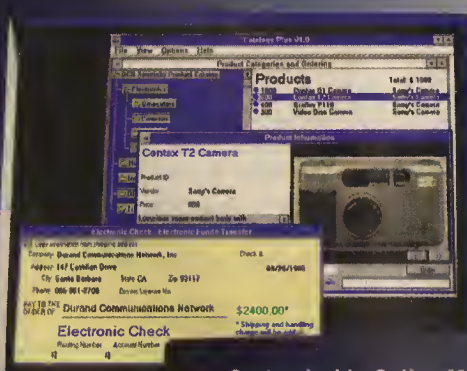
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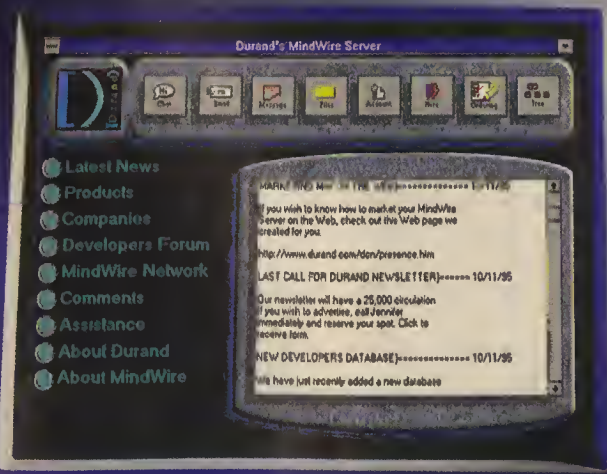
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SPEAKING JAVANESE

by Jason Osgood

This month's topic is the conceptual design of WebBBS. I'll also cover some of the constraints that influence the design and implementation. Then, as promised, I'll tell you everything you need to know about the exciting world of Java. And I'll wrap up by letting you know what to expect in upcoming columns.

CONCEPTUAL MODEL

When I was a sysop, creating and deleting message folders to meet the ever changing needs of visitors was a constant challenge. Either the message folders were too general, and attracted too many messages, or too specific, in which case there was too little traffic to sustain the folder. Or maybe just short-lived, as in covering a current event, and I'd have to remember to delete the folder when the event was over.

The ideal would be to have the visitors create and destroy discussion groups as needed. While I'm dreaming, I'd like to have different types of discussion groups to address different needs. When a new group is created it can be set up with these properties: public or invite-only, announcements only (no recipients in message header), and moderated (messages must be approved by the moderator before being posted).

To reduce the sysop's burden, the discussion groups will be automatically removed if they go unused. There will also be a nifty utility to automatically archive a discussion group to a separate file and make that file available for downloading. And of course, an event scheduler will permit regular automatic grooming and compacting of the message database.

For me, WebBBS is an experiment to see if there's a niche somewhere between newsgroups (too noisy), list servers (invasive) and e-mail distribution lists (hard to maintain). There has to be some way to improve the signal-to-noise ratio without impeding access unduly. Maybe an adaptive forum like WebBBS is the answer. The idea isn't new. Multi-user dungeons (MUDs) are similar. There's also the Stonehenge genre of BBS packages that allow users to create their own "rooms." My personal experiences with such systems has been positive.

SYSTEM DESIGN

WebBBS will be made up of these components: a Java enabled Web browser, an HTTP server, an SQL database server (database), a WebBBS server Java

application (BBS) and a WebBBS client Java applet (client). The browser and client will reside on the visitor's computer. The HTTP server and BBS will reside on one host computer. The database will reside on a second host computer.

The BBS serves as the bridge between the client and the database. The BBS also implements all of the Web BBS functionality. For security reasons, the BBS communicates with the database via named pipes instead of TCP. This isolates the database from the rest of the world.

The BBS component is multithreaded, with one thread per connection, so it can handle multiple users simultaneously. The BBS maintains a queue of database transactions and processes them sequentially. There are two advantages to this approach. It will be easier to fine tune database performance. And I only have to buy a single SQL/Server end-user license.

Eventually, some of WebBBS' functionality will be migrated to the database (implemented as stored procedures), to offload some of the processing from the BBS. Localizing WebBBS functionality on the database makes it easier to implement WebBBS using another technology, such as Microsoft's Blackbird or General Magic's Telescript, if the need arises.

Another change may be the BBS will use HTTP to communicate with the client, instead of a direct connection. It is not at all obvious to me how to do this at this time. Nevertheless, HTTP is being improved, extended and maybe even replaced (by HTTP-NG, "NG" for next generation). These future extensions will be much more efficient (e.g. downloading a home page can be 10 times faster). So it may be simplest to piggyback instead of duplicating the effort.

FIELDS OF CHOICE

The following table is my first strike at defining the database tables and fields for WebBBS. An asterisk prefix denotes which record(s) will be used for the unique value (key) index.

The Users table (below) is straightforward. The pseudonym will allow anonymous participation, if warranted. I want the visitor's e-mail address so I can spam her/him if necessary. The visitor also has the option of having personal mail forwarded, which is stored in Forward Mail.

Jason Osgood was a sysop and BBS network administrator for 4 years. Like all Seattle natives, he enjoys grunge rock, rain and fine coffee. Jason's life-time goal is to make technology more useable and useful, particularly in the field of computer aided design software. He volunteers time to both a local conservationist group and a local school district's technology education initiative. Jason pays the rent doing contract programming and user interface design work. You can e-mail Jason at <mailto:josgood@seanet.com>

USERS TABLE:

Fieldname	Type
*User ID	(internal)
Login name	String
Pseudonym	String
Real Name	String
Password	String
Forward Mail	Boolean
External e-mail address	String

The Subscriptions table (below) serves to build the one-to-many relationship between users and the discussion groups they are subscribed to. In other words, one record will appear for each discussion group that each user is subscribed to. The unique key is a combination of the Discussion Group ID and User ID fields. The privileges are shown as a bit mask, but that might be broken out into separate fields for each privilege. The possible privileges are Post, Reply, Delete, Modify Headers, and Moderator.

SUBSCRIPTIONS TABLE

Fieldname	Type
*Discussion Group ID	(internal)
*User ID	(internal)
Last Message Number Read	Integer
Privileges	Bit mask

The Discussion Group table (below) has a record for each of the discussion groups in WebBBS. The Type bit mask field may also be broken out into separate fields. The possible types are Announcements, Moderated, and Invite-Only. Announcement groups will serve the function of bulletins. Moderated means posts need to be approved by the Moderator. Invite-Only means the group is not public. The date fields help the sysop gauge activity and are used by the automatic grooming feature to remove unused discussion groups. The Disable Groom flag prevents the discussion group from being whacked.

DISCUSSION GROUP TABLE

Fieldname	Type
*Discussion Group ID	(internal)
Moderator	(User ID)
Description	String
Type	Bit Mask
High Message Number	Integer
Last Post	Date
Last Access	Date
Disable Groom	Boolean

The Messages table has most of the fields you'd expect. I don't include support for carbon copy or return receipts, because as a sysop I hated those features. Instead of using the Discussion ID in conjunction with the Message Number to create a unique key, I choose to have a separate unique Message ID. This facilitates the movement of messages to new discussion groups. Since Replies To field references Message ID, it's easier to move entire threads too.

Message Header Table

Fieldname	Type
*Message ID	(internal)
Replies To	(internal)
Discussion Group	(internal)
Message Number	Integer
Author	(User ID)
Recipient	(User ID)
Subject	String
Date	Date
Received Date	Date
Approved	Boolean
Deleted	Boolean
Disable Groom	Boolean
Message Body	Chunk

A WORD ABOUT DATABASES

Object-oriented and relational database design are quite different. In an object-oriented database, you create base classes which are then subclassed (extended) to meet special needs, creating a class hierarchy. This makes it easy to grow or adapt the database to changing needs. In a relational model, everything known about the data needs to be gathered and normalized (which

basically means that all duplicate information is removed).

A simplified example of object oriented design would be to define a base class called **MessageHeader** that has the properties of **Author**, **Recipient**, **Subject** and **Date**. Then for moderated discussion groups, create the subclass **ModeratedMessageHeader** which inherits all of **MessageHeader's** properties and then adds the property **Approved**. Relational design is different in that it's likely that all message headers would have all five properties and non-moderated groups would simply ignore the **Approved** property.

Each approach is powerful for certain types of problems. Most traditional BBSs use a database structure that is best categorized as relational. This is really good for storing lots of records of identical type and equal length, such as message headers. It's not so hot for storing varying datatypes of varying sizes, such as message bodies. For that, an object oriented database would be best.

I bring up the issue because we need to be aware of the two different representations WebBBS has for the same data. As a Java program, WebBBS discussion groups and messages will be implemented as classes with new subclasses created for each type of discussion group (e.g. public or invite-only). But on the SQL database server, all discussion groups and messages will be stored in all-encompassing tables.

This duality is actually quite a hurdle. The process of representing objects in a relational model even has a name: *deobjectification*. This means that each of the discussion group and message header classes and subclasses will require its own routines to access the equivalent records in the database.

It's said that a good programmer can program FORTRAN code in any language. You may be asking yourself, why am I bothering with strict object oriented data modeling for WebBBS (within the Java code). The reason is that I hope to eventually replace the SQL relational database with an object oriented database. I also hope to make it easier to support new datatypes in the future, such as audio and video messages.

CAN YOU HANDLE THIS PROTOCOL?

I want to implement the WebBBS client as a protocol handler. The difference

between a protocol handler and an applet is how they are activated. For reference, the prefix in a Uniform Resource Locator (URL), such as the "http:" in <http://www.boardwatch.com>, specifies which protocol to use. When HotJava decodes the URL, it calls the appropriate protocol handler, installed by name under the `classes/java/www/net` directory.

Implementing the client as a protocol handler means that whenever a URL specifying WebBBS is encountered by HotJava, such as `wbbs://bulletin/1` or `wbbs://download?/autocad/sample.zip`, HotJava will know what to do. This could happen from within an e-mail, from the "go to" field or in an HTML document. If the client were implemented as an applet, then it could only be activated from within an HTML document.

Unfortunately, it is not apparent at this time whether or not all Java enabled browsers will support installable protocol handlers. Furthermore, it's not clear how *any* Java code will be installed, protocol handler or applet. As it stands now, the Web browser's own cache is the only facility for storing downloaded applets. I was kind of hoping that once a user downloaded an applet it wouldn't need to be downloaded again unless the applet changed. Sun says they are working on the problem.

RESOURCES

Aside from Sun's Java home page, the only two Java resources you need to know about are **Gamelan** — <http://www.gamelan.com> — and David Forster's **J*** Notes** — <http://www.io.org/~mentor>. Gamelan (a Javanese word for some kind of drum) is an excellent index of Java information, sample applets, Java activated home pages and so forth. J*** Notes is a condensed version of most everything (of worth) said in the `comp.lang.java` newsgroup. Updated weekly, J*** Notes is an amazing resource.

Sun made a plea for everyone to switch from the Java related list servers (e.g. `java-interest`, `hotjava-interest`) to the `comp.lang.java` and `alt.www.hotjava` newsgroups. All of the messages from the list servers are forwarded to the appropriate newsgroup, so you won't miss anything. Unfort-

unately, `comp.lang.java` is overflowing at about 80 news messages per day (hence the value of J*** Notes).

Two Java books are now available. **Java!** by Tim Ritchey (ISBN 1-56205-533-X, published by NewRiders, (800)716-0044 or (317)361-5400) is a good introduction to Java and HotJava, if a bit repetitive. It briefly covers object-oriented concepts, and the Java API. **Presenting Java** by John December (ISBN 1-57521-039-8, published by Sams.Net, (800)716-0044 or (317)361-5400) is pretty much the same, but a bit more concise. Unfortunately, both books cover the alpha3 release of Java and HotJava. While not great literature, I did find both of these books helpful, if only because there is so little information available about Java at this time.

UP AND COMING

Unfortunately, the Java world is still in turmoil. Last month, I made the decision to forego the alpha 3 release in favor of the newer prebeta. The API underwent a major overhaul and some aspects of the Java language changed between releases. Why waste time on the alpha 3, right? Well, things are somewhat more complicated than that.

The prebeta compiler is only available on the SPARC Solaris platform. So I went out and bought myself a SPARC. Oops, there is no prebeta HotJava. Indeed, Netscape's Navigator 2.0J ("J" is for Java) is the only browser available for testing the prebeta applets. That would be fine, except that Navigator crashes on my system whenever it attempts to run Java code (a known problem). So I've had to use the Applet Viewer or run Navigator on my

NT machine.

To further complicate development, some of the features I need to implement WebBBS are disabled or missing from Navigator 2.0J. The sockets classes don't work, which makes it difficult for the WebBBS client to chat with the WebBBS server. Navigator also apparently doesn't support installable protocol handlers. Hopefully these problems will be corrected.

Because of these constraints, I've decided to skip ahead to the task of creating a Java class library for accessing SQL/Server. I've got a pretty good start by using a cheat sheet from my SQL/Server guru buddy. I'm hoping that I'll have this part working about the time the prebeta HotJava browser and/or the final (stable) Navigator 2.0J is released. Otherwise, I'll be reduced to developing for the alpha3 release and porting everything to prebeta at a later time.

Next month, I'll present the class libraries I've made for WebBBS and talk about the user interface design for the client. If nothing else busts loose (e.g. prebeta HotJava is released for NT or the sockets classes are put back into Navigator 2.0J), I'll discuss the classes for accessing SQL/Server.

Cheers, Jason ♦

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Notes From The Underground by Wallace Wang

THE OTHER SIDE OF COMPUTER VIRUSES

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672@compuserve.com or bothekeat@aol.com or bo_the_cat@msn.com

Almost everyone has heard all the horror stories about computer viruses by now. Somebody knows somebody whose BBS got trashed by a computer virus; who downloaded a virus from a BBS that promptly wrecked their entire hard disk; or whose local area network had to shut down because a computer virus ran rampant throughout the entire system.

While computer viruses are real and can make the lives of sysops and BBS callers miserable, there's another side of the computer virus story that the news media conveniently ignores. Forget about the fact that many current and former virus programmers work for companies that sell anti-virus programs, that virus programmers regularly swap information and live computer virus source code between themselves and anti-virus companies through underground virus exchange bulletin board systems, or that many companies sell shoddy anti-virus programs because they know that the average consumer has no way of verifying the quality of an anti-virus program anyway.

While this side of the computer virus story has remained a dark secret among the virus community, a more important side of the computer virus story needs to be revealed as well. Despite the fact that the news purports to be objective, when was the last time you heard about the possible good side of computer viruses? Nearly every story about computer viruses paints an image of some twisted teenage, social outcast writing computer viruses for the sole purpose of wrecking hard disks of complete strangers on the other side of the world. But believe it or not, there actually exists a beneficial computer virus that could protect your computer and possibly your freedom as well.

"The KOH virus simply asks for your permission to encrypt all the data stored on your floppy or hard disk."

This virus, dubbed the Potassium Hydroxide (or KOH) virus can spread and infect computers like any

other computer virus. But instead of wiping out files or displaying silly messages on the computer screen like most computer viruses, the KOH virus simply asks for your permission to encrypt all the data stored on your floppy or hard disk.

This encryption method is based on the International Data Encryption Algorithm (IDEA), which was developed outside of the United States. Since no American government agency helped fund or develop the IDEA encryption standard, you can safely assume that no American agency possesses a secret backdoor that allows it to crack any data encrypted by IDEA.

Even better, although the IDEA encryption standard is fairly new, most cryptographers believe it's much stronger than the older American Data Encryption Standard (DES) that even the American government won't use for protecting classified information.

So how does the KOH virus compare to other encryption programs such as the well-known Pretty Good Privacy (PGP) program? Most importantly, using PGP requires active participation from the user. If you forget to use PGP, the PGP can do nothing to encrypt your data. But if you run the KOH virus, it politely asks for your permission to encrypt your entire hard disk.

At this point, every file on your hard disk will be encrypted by the KOH virus. Even better, any new files that you create or copy on to your KOH-encrypted hard disk will get encrypted as well. In this way, the KOH virus insures that all of your data is protected, not just the few files you remember to encrypt using another program like PGP.

"The KOH virus insures that all of your data is protected, not just the files you remember to encrypt."

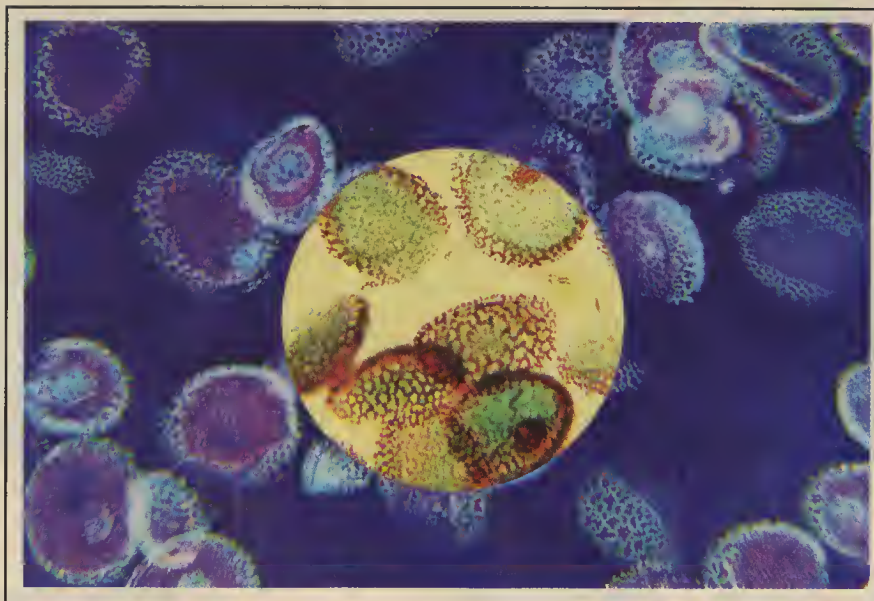
Now if you insert a floppy disk into your computer, the KOH virus politely asks for your permission to infect that floppy disk as well. If you want, you can use a different password to infect your floppy disks. That way you can share encrypted floppy disks with

others while retaining a separate password to protect your hard disk.

Creating a new file or copying a file on to a KOH-encrypted floppy disk encrypts that file as well. If you insert a KOH-encrypted floppy disk into a new computer, the KOH virus asks for permission to infect that new computer's hard disk as well. By spreading like a virus, KOH makes sure all of your data gets encrypted so you don't have to worry about encrypting separate files or floppy disks yourself.

So what does this mean if you're running a BBS that the government suddenly decides to raid? If you've been using the KOH virus, your BBS data and all your floppy disks will be encrypted, protecting your data from prying eyes. When your computer is safely back in your hands again, type the magic password and you'll have complete access to all your programs and data as if the encryption never existed.

Happily, the KOH virus is freeware and has been tested on various computers to insure compatibility with all versions of MS-DOS, Windows 3.0 and 3.1, and



various disk compression technologies like Stacker and DoubleSpace. In case you don't trust the KOH virus with your computer, test it on a computer belonging to someone you don't like. That way if the KOH virus is incompatible for some reason, at least your computer will still be safe.

For those who still don't trust the idea of letting a virus loose on your computer (beneficial or not), buy the actual assembler source code and make sure the KOH virus really isn't a Trojan Horse in disguise. Once you've had a chance to examine the source code yourself, compile it using Turbo Assembler or Microsoft's Macro Assembler. (To order the KOH virus along with its

assembler source code, write to American Eagle Publications, P.O. Box 1507, Show Low, AZ 85901.)

If you're running a BBS that contains material that some preacher in Alabama might find offensive, if you're traveling with a laptop computer that contains important secrets that rival corporations (or countries) might try to steal, or if you're terrified that the American govern-

ment or the United Nations might break down your door one day and haul your computer away, you owe it to yourself to consider using the KOH virus. (Like all encryption technology, the American government forbids exporting the KOH virus in executable form, although it's perfectly legal to export it in source code form.)

So the next time you need an encryption program, try the KOH virus and discover for yourself the benefits of computer virus technology. And while you're at it, take another look at your favorite mainstream magazines and ask yourself what other information they may be trying to hide from you. ♦

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GLOSSARY

bps - Bits Per Second - a measurement of data transmission speed.

CGI - Common Gateway Interface, an Application Program Interface (API) peculiar to the UNIX operating system which allows a **Web server** to pass data from an HTML document to a CGI script, which runs various programs as necessary and returns resulting data for display over the **Web**

COM port - Serial ports on the IBM PC compatible computer, usually, but not always used for data communications, are referred to by system designators COM1, COM2, COM3...etc.

Conference - An group of public messages on a Bulletin Board System, usually focussed on a particular topic and often moderated by a conference host or moderator who guides the discussion. Also called Folder, SIG (for "Special Interest Group") or Echo. See also **Newsgroups**.

cps - Characters Per Second - characters usually referring to a single 8-bit byte of data. With start and stop bits, a total transmission of 10 data bits is usually required to transmit a single character or data byte.

CSU/DSU - Customer Service Unit/Digital Service Unit. A hardware device that provides a digital interface to high-speed leased lines (see **T1**). Looks and acts like a modem, and all too many people call it a "digital modem." However, a CSU/DSU does not MODulate or DEModulate analog (voice) signals; it deals with digital signals from end to end.

DNS - Domain Name Service, a two-column look-up table system of matching mnemonic machine names such as **boardwatch.com** to their numeric IP addresses (204.144.169.1). The tables are maintained at local, regional, and global levels by various organizations, making it easier for humans to find their way around the Internet or their LAN.

Echomail - collections of public messages shared by multiple BBSs. A message entered on one BBS in an echomail conference will be

"echoed" in corresponding conferences on any number of BBSs which choose to receive the same conference. Replies from users on all member systems are likewise echoed to all participating systems.

FAQ - Frequently Asked Questions - a file established for many public discussion groups containing questions and answers new callers often ask.

Finger - an application program which will search a particular machine connected to the Internet for a specified entity and return any information about the fingered entity that may be stored on the machine's **finger server**. You need to supply a search string, e. g., **finger hakala@boardwatch.com**, which includes the full **DNS** name of the specific machine. Therefor finger does not help you learn where a given entity connects to the Internet, but you can learn which people use a given site. See also **ping** and **whois**.

FTP - File Transfer Protocol - an application program that uses TCP/IP internetworks as a medium for transferring files. You can logon to an ftp site using an ftp program and transfer files from their site to your local desktop using a GET command. Many sites allow ANONYMOUS ftp. At the login prompt, enter ANONYMOUS as the login name, and at the password prompt enter your e-mail address as password. You will have access to a limited number of public directories from which you can retrieve files.

Example: **ftp boardwatch.com**

Home page or **Homepage** - the top-level hypertext document in a collection of linked **HTML** documents. Often, the document implied in a **WWW** site's **URL**, e. g. **http://www.boardwatch.com/homepage.html** is generally rendered as **http://www.boardwatch.com**.

HTML - Hyper Text Markup Language, the programming language used to create **WWW** pages and define the functions to be performed when one clicks on a button, image, or hypertext link embedded in the page.

HTTP - Hyper Text Transport Protocol. The

method by which the World Wide Web provides hypertext links between web pages - often located on entirely different machines.

IP. Internet Protocol. The underlying packet protocol used to connect networks over the Internet.

ISDN - Integrated Services Digital Network, an all-digital telephone system specification. Basic Rate Interface (BRI) consists of two 64 Kbps bearers or "B" data channels and one 16 Kbps supervisory "D" channel, leading to the designation "2B+D." BRI ISDN can deliver data to the home at speeds up to 128 Kbps by combining the two B channels and is the only digital telephone solution capable of using *existing* copper wire to the home.

ITU - International Telecommunications Union - a standards body operating under the aegis of the United Nations to standardize telecommunications protocols for interoperability. Replaced the earlier **CCITT** group.

JPEG - Joint Photographic Experts Group - a standard for compressing digital photographic images.

KB - Kilobyte - 1024 bytes - often generically applied to 1000 bytes as well.

Kbps - Kilo Bits Per Second - a measure of data transmission speed indicating 1024 bits transitting in one second.

LDS - Long Distance Service - a long distance telephone company such as MCI or Sprint.

LEC - Local Exchange Carrier - local telephone company.

Mbps - Mega Bits Per Second - a measurement of data transmission speed indicating 1024 kilobits per second or 1048576 bits per second.

MB - Megabyte - technically 1024 kilobytes or 1,048,576 bytes - but often applied to the more rounded term of one million bytes as well.

MOSAIC - A World Wide Web interface program available for Windows, Macintosh, and

UNIX X-Windows that provides a graphic multimedia interface for WWW home pages.

MPEG - Motion Picture Experts Group - a standard for compressing digital video images.

Multiport serial board - a plug-in card that extends the number of **COM** ports an IBM-compatible computer can simultaneously support beyond the factory-standard two. Enables running more than two serial devices at the same time, as in a multi-line BBS. Typical configurations offer, 4, 8, 16 or 32 ports on a single card.

Newsgroups - collections of e-mail messages arranged in a hierarchical topic structure and distributed to computers all over the Internet. Users of sites that receive newsgroups can elect to receive particular newsgroups, add messages to the shared message base, and thus join several global special interest groups. There are currently over 12,000 USENET newsgroups available.

NNTP - Net News Transfer Protocol - a protocol used to transfer USENET News Groups from one Internet site to another via Internet Protocol.

Null modem cable - a cable whose connectors are wired so as to permit serial port transfers of data between computers as if they were communicating via modems. Data transfer speeds may reach 115 **Kbps** over null modem cables between IBM-compatible PCs.

Ping - an application program that will tell you if a particular entity is presently connected to the Internet. Useful in diagnosing connection problems or checking up on employees who should be working instead of playing Doom. See also **finger** and **whois**.

POP - Point of Presence - in the telephone world this is the geographic location of a particular switch or service.

POP3 - Post Office Protocol - an alternative mail protocol used to service intermittent dialup connections to the Internet whereby mail is held until the caller makes the connection and requests mail. Most SLIP or PPP dialup account users will receive mail from a POP3 account using a program such as PC Eudora.

PPP - Point to Point Protocol - a type of Internet Protocol used via serial connections by modem. A dialup connection providing IP connectivity. Developed later than Serial Line Internet Protocol (SLIP) to accomplish the same intermittent dialup connection function.

Protocol - A system of rules and procedures governing communications between two devices. File transfer protocols in your communications program refer to a set of rules governing how error checking will be performed on blocks of data.

QWK - File extension for bags created by Quick Mail - a standard for offline mail readers.

RBOC - Regional Bell Operating Company - a provider of local telephone service such as U.S. West or Bell Atlantic.

Router - A device that connects two or more networks, such as your LAN in Boise and mine in Chicago, at the network layer. "Also," according to Bernard Aboda's *The Online User's Encyclopedia*, "an expensive device manufactured by hi tech firms with inflated stock prices."

Server - a computer dedicated to providing specific services to **client** computers. Print servers, for example, do nothing but accept, store, and print out jobs sent to them by other computers. An **FTP** server is dedicated to file-suckers everywhere.

Shareware - computer software which users are encouraged to copy and distribute to others, and to evaluate for a specified or indefinite period of time. The author gives the user a license to "try before you buy," and requires voluntary payment of a specific sum of money if the user continues to use the software. Failure to pay the requested fee is a legal violation of the author's copyright rights.

SLIP - Serial Line Internet Protocol - an implementation of IP over serial ports/modems - usually on an intermittent dialup basis. Developed by Rick Adams of UUNET Technologies, SLIP is a predecessor of the Point to Point Protocol (PPP) also used for dialup IP connections.

SMTP - Simple Mail Transfer Protocol - the most common method for relaying electronic mail over the Internet.

T1 - A classification of leased telephone line service offering 23 voice channels and 1 supervisory channel or 1.544 Mbps digital data service.

TCP/IP - Transmission Control Protocol/Internet Protocol. The basic packet protocol used to connect machines globally on the Internet is referred to as the Internet Protocol or IP. The Transmission Control Protocol (TCP) interacts with IP to provide an application protocol interface. The term has come to generically refer to a family of protocols used to connect local area networks to one another, forming an internet, and more specifically the global internetwork referred to as The Internet.

TELNET - An application program that allows users to interactively logon to menued services provided at TCP/IP Internet sites.

Example: `telnet boardwatch.com`.

UUCP - Unix to Unix Copy Program - a series of programs and algorithms used to transfer files, and electronic mail by dialup modem. Many bulletin boards provide e-mail/newsgroup access by using UUCP to connect to an Internet provider, and are not actually connected to the Internet by IP.

URL - Uniform Resource Locator - a system of references to different Internet sites indicating the both the site and type of protocol or application program used to reach it: e-mail, ftp, http, gopher, etc.

Example: `http://www.boardwatch.com` indicates a Hyper Text Transport Protocol address on the World Wide Web (WWW) with location `www.boardwatch.com`.

USENET - Users Network, one of the earliest networks of computers which exchange e-mail conferences via the Internet using **UUCP** and **NNTP**. Properly capitalized in full but often rendered as "Usenet." Estimated to include over 70,000 nodes, 12,000 newsgroup conferences, and 2 million readers.

V.17 - International standard for facsimile transmissions at speeds up to 14,400 bits per second.

V.32bis - International standard for modem data communications at speeds of up to 14,400 bits per second.

V.34 - International standard for modem data communications at speeds of up to 28,800 bits per second.

V.FC - V.Fast Class - a pre V.34 proprietary modem modulation standard for 28.8 kbps connections developed by Rockwell International and Hayes Microcomputer Products.

Web - See **WWW**.

Whois - an application program which queries any of several **whois servers** to locate information about a given Internet user. The command **whois hakala**, for example, may retrieve the full name, geographical and e-mail address, voice phone number, and other information about any Hakalas who have Internet accounts. See also **ping** and **finger**.

WINSOCK - A Dynamic Link Library (DLL) program for Microsoft Windows that provides a simple program interface to TCP/IP services. Originally developed by Net-Manage, Inc., it has become the model for most Windows based Internet application programs. The most widely used WINSOCK.DLL would be the shareware program TRUMPET Winsock. Internet application programs then use WINSOCK for TCP/IP services.

WWW - World Wide Web - a network of graphical hypertext servers linked by The Internet offering graphics, sound, text, and in some cases video clips providing information.

ZIP - File extension for files catalogued and compressed using Phil Katz' PKZIP compression utilities. ♦



CONSUMMATE WINSOCK APPS by Forrest Stroud

There are those that say life is like a box of chocolates — you never know what you're going to get. Without a doubt, there is no better example of this than the Internet.

Diamonds in the rough are rare, but even rarer still is that elusive golden nugget of pure knowledge. While at one time the ratio of information-replete web sites to information-deplete sites was higher than the number of times I've been called "Forrest Gump," those days are long, long past. Unfortunately, the release of Windows 95 has only added to the problem by giving anyone with a PC and an Internet connection the ability to post a virtual smorgasbord of personal interests and nonsensical creations. So does this mean that a Net saturated with web sites and pages devoted primarily to self-interest alone is bad?

I think not. The Net, and the web in particular, is the only medium of communication in history where an individual's thoughts, ideas, and products have the ability to attract the same amount of attention and exposure as those of the largest Fortune 500 companies. This environment is a hotbed for producing the greatest of inventions as well as the least significant of creations. But to someone, somewhere, the least significant of creations is nothing less than the greatest thing to hit the Net yet. It's the ability to bring together those of similar interests, regardless of geographic predisposition, that makes the Net so wonderful. And it's for this reason that its use in schools, companies, and homes throughout the world is so important. For better or worse, nothing else in this world has ever had the potential to bring together so many different and diverse cultures. So long as we take responsibility for ourselves in protecting and fostering the environment that exists solely for our entertainment and self-interest, the Net will not exist for the worst of humanity; rather it will exist for the greatest good.

WINWEATHER

WinWeather brings weather reports and forecasts from all over the world to your PC. Two to ten cities per state and nearly one hundred cities from outside the United States can be referenced in the current version. Information available for each site includes temperature, humidity, air pressure, wind speed and direction, general weather conditions, and weather forecasts (forecasts, however, are only available for cities in the United States). You can also configure WinWeather to automatically refresh its information

periodically, giving you access to continual up-to-date weather stats. One of WinWeather's best features is that you only have to pay a one-time registration fee for the program — after that you get all the free weather updates you could want.

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://cwsapps.texas.net> and <http://cws.wilmington.net>.

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at <mailto:Neuroses@mail.utexas.edu>.

WINWEATHER

City	Date	Temp.	Hum.	Press.	Wind	Weather
Chicago	9 NOV 95 2 PM CST	-38°	52%	28.95	SOUTH 15	Fa.
New York City	9 NOV 95 3 PM EST	-45°	25%	30.18	NW 10	Fa.
Denver	9 NOV 95 12 PM MST	-67°	20%	28.35	WEST 21	Fa.

Desc: Hourly weather reports and forecasts — on your PC!

Pros: Finally, an app that delivers the weather to your computer; one time fee of **\$19.95**

Cons: Lacks a minimize button, slightly buggy, relies on only two servers for information

Location: <ftp://ftp.frontiernet.com/pub/mirrors/winsock-1/Misc-Winsock/>

Filename: weather.zip

Status: Shareware - **\$19.95**

Author: Insanely Great Software


The information provided by WinWeather is, without a doubt, essential for many users, but there are a few negative aspects that keep WinWeather from being even better. First, there are a few bugs in the current release, including one in which the scrollable list for selecting cities sticks from menu to menu. Second, there is no option to minimize WinWeather, a critical drawback for Windows 95 users especially. Third, WinWeather relies on only two servers for its information (you can change these servers but there are not many other ones currently available); therefore, you're dependent on their status for your information. As a result, when the servers are busy (quite often), weather updates can take several minutes. Aside from these few setbacks, WinWeather is definitely "The Real Deal" when it comes to the on-demand deliverance of weather reports at your feet... umm ...to your computer, that is.

STATBOT

Statbot offers the most features of the web statistic services currently available and is also the most customizable. A tradeoff for these two benefits is that it can also be one of the more difficult services to get up and running. While Internet Audit Bureau and Web-Counter can be initialized merely by filling out a web form, Statbot requires you to run a separate program on your web site's machine. Although this is a slightly more detailed process than that of other

services, for most users this will not be a serious problem and will even be a benefit in the long run. By running Statbot at your own site, you bypass the typical delays experienced with either of the other two statistic services (Web-Counter and Internet Audit Bureau). In addition, Statbot offers a collection of features currently missing in the competition, including a database of records, individual user reports, resettable stats, multiple page counts, and graphical charts (to be in the next release).

STATBOT



Desc: An excellent web statistics program

Pros: Excellent stats program, multiple page counts, individual user reports, internal database, more

Cons: Can be slightly difficult to set up, lacks graphical charts (for now)

Location: <http://www.xmission.com/~dtubbs/club/cs.html>


Status: Shareware: Individual - \$10. Commercial - \$20

Author: Dave Tubbs

Two of Statbot's best features are that you can easily track any number of pages at your site and that you can get comprehensive statistics for the entire site as well as for each individual page. Statbot gives you a configurable list of options for customizing your stat reports and can also be configured to run automatically on UNIX machines at any interval of time — by the minute, hour, day, week, or similar. Statbot currently offers versions for a wide range of platforms, including Sun/Solaris, SUN OS, DOS, IRIX, HP/UX, Linux, FreeBSD, BSDI, DEC Alpha/OSF, DEC Ultrix, and more. In order to use Statbot, you'll need access to your server's access logs and access to the cron command for UNIX platforms (for running Statbot automatically). If you can meet the requirements (persuade, bribe, or beg your system administrator into helping you if necessary), this is one web statistics program that you won't want to be without.

VISUAL IRC

VISUAL IRC



Desc: A great new IRC client with real-time audio chat capabilities

Pros: Quick, easy to use client; powerful and unique features, including real-time audio chatting

Cons: Could be more intuitive, especially for new users; some features could be improved

Location: <ftp://ftp.undernet.org/pub/irc/clients/windows/>

Filename: `virco????.zip`

Status: Free beta release

Author: Adrian Cable

Visual IRC (ViRC) is a new Internet Relay Chat client rich in features and in ease of use. Some of its many features include

support for text attributes (bold, italics, and underline text), pause and resume, aliases and macros for creating your own IRC commands, a LagScope feature for letting you know how server delays are affecting your elapsed time, userlist support for turning yourself into a simple "bot," grouplist support for quickly scoping out all the channels currently available, and much more. There is even the capability for real-time audio chatting with ViRC, as well as video, sound effects, MIDI, and synthesized speech for the full multimedia effect. You can also send and receive files through IRC using DCC support. ViRC even gives you full hyperlink support, which allows your web browser to load a document when you click on a link from within Visual IRC.

There are few features that need improvement, and with the release of Beta 0.80 this list has grown even shorter — for example, the channel list now offers a filtering capability based on the number of users and/or selected text snippets, a feature greatly missed in previous versions. Still, the context sensitive help documentation could be augmented, and some of the features could be made more user-intuitive. Overall, though, ViRC offers a ton of cool features, many never before seen in an IRC client, and does so with one of the easiest to use interfaces that I've seen for an IRC app. This is a must-have client for all the serious IRC users out there.

WINCODE

Desc: An excellent application for handling all of your encoding/decoding needs

Pros: Finally, an app that meets *all* of your encoding/decoding needs; tons of features

Cons: Lacks virus checking and BinHex encoding, many programs already have encoders/decoders

Location: <ftp://snappy.globalone.net/pub/>

Filename: `wncod???.zip`

Status: Freeware. (Help file is shareware - \$5)

Author: Snappy Software


WINCODE

Wincode quickly and efficiently handles all of your encoding and decoding needs — needs which become all too obvious when dealing with one of the many apps available that don't incorporate automatic encoders/decoders. Among the many types of files supported by Wincode are MIME (Base 64), BinHex (currently decoding only), UUencoding, and even user-defined file types. Wincode also includes a concatenation option for automatically grouping multiple files and a status bar for graphically representing the amount of time involved in the encoding/decoding process. While Wincode is a free-ware application, the help file is actually shareware (\$5) and is highly recommended. With so many options available to users, the help file will likely pay for itself with an endless supply of tips and hints.

Features in Wincode include automatic zipping/unzipping of your files to be encoded/decoded (using PKZip/PKUnzip), a filesort command for setting up multi-part encoded files in their correct order, an Auto E-mail option for encoding or

decoding your e-mail messages upon sending/receiving them, and an application "hook." Hooking an application enables you to call Wincode to encode/decode files directly from within the application, saving you considerable time and effort. Wincode can also be integrated into an application via a floating menu rather than a hook. These are only a few of the available features in Wincode, but it should be immediately obvious from these few that Wincode has the ability to handle nearly all of your encoding/decoding needs. The lone feature missing that I'd like to see is an automatic virus check upon decoding a file; aside from this minor criticism, Wincode is an excellent program indeed.

SOFTERM PLUS



PRODUCT INFORMATION

Desc:	New Net suite with a variety of apps including PowWow
Pros:	Extensive collection of Net apps in one package; PowWow and graphics viewer included
Cons:	Mail and lpr apps less than outstanding, lacks integration between apps
Location:	ftp://ftp.softronics.com/pub/shareware/
Filename:	softerm.exe
Status:	Shareware - \$49.95
Company:	Softronics

SOFTERM PLUS


Softerm is a solid collection of Net apps bound to impress many users. The web browser offers quick, efficient performance with document and image caching, user-definable preferences, an extensive listing of common bookmarks, centering, transparent images, and more. At the same time, it's not quite as feature-rich as standalone clients like Internet Explorer and Netscape 2.0. Missing features currently include support for tables, client side image mapping, null borders, and some additional Netscape HTML tags. Also included in this extensive suite of clients is a graphics viewing client (with support for nearly every image type imaginable); a mail, ftp, and lpr integrated set of clients (with an interface extremely similar to WinQVT); an enhanced ftp file manager (with an interface extremely similar to the Windows 3.x File Manager); the latest version of PowWow; and a dedicated TCP/IP dialer for connecting to the Net.

Of these features, the FTP file manager is the most interesting and useful. Both remote and local sites can be set up side by side and sending/receiving multiple files can be carried out with ease. Still, even this enhanced FTP client is no match for the likes of a standalone client like CuteFTP or WS-FTP. The PowWow client is a great addition and an unprecedented one for a Net suite. All of the features in the standard standalone PowWow client are retained in Softerm. The graphics viewing client is another added plus for users. It does lack some of the better features found in standard graphics viewers, though, including slideshow capability, advanced conversion tools, and transparent/interlaced GIF support. Like PowWow, the addition of Softerm's Picture-Viewer is a first for a Net suite. The telnet client doubles as a modem dial-up communications tool and offers an impressive set of features. The mail, ftp, and lpr set of apps are patterned after the same set of clients as in

WinQVT. All three are lacking in many features and are bested by several other integrated Net suites and standard apps.

As a Net suite, Softerm performs admirably and will be more than suitable for many users, especially newbies to the Net. And at less than \$50, Softerm is also one of the cheaper Net suites available. It does have a few shortfalls, though. First, the entire set of apps could be integrated rather than loaded separately, or at the very least a launchpad could be used to manage the apps. Second, a news client in Softerm hasn't been implemented quite yet but is expected to be released in a future version. Also, to truly become competitive in this field, Softerm will need to make some serious improvements to the mail client and web browser. For a new release, Softerm is looking quite good, and I expect that future improvements will make it even more attractive to users.

I-VIEW



Desc:	A full-featured offline HTML browser for royalty-free distribution of docs
Pros:	An offline HTML browser with many advanced web features
Cons:	Lacks some of Netscape's best features, expensive for many users
Location:	ftp://ftp.best.com/pub/icom/
Filename:	ivw?????.zip
Status:	Shareware - \$19.95. Royalty-free licenses also available
Company:	Talent Communications

I-VIEW

I-View is an offline HTML browser designed primarily for royalty-free distribution of HTML files. The premise is simple — in order for your clients without web access to view HTML documents, they are going to need a browser. I-View efficiently satisfies this need by allowing you to pay a one-time price for I-View, rather than having to pay every time you send out a copy of the browser. As an offline browser, I-View can only view local documents (Talent Communications has also released an impressive *online* web browser, I-Comm, reviewed below), but it does offer an extensive selection of features for the purpose. Included are support for tables, background images, interlaced GIFs, image maps (server side only), center and other advanced HTML tags, printing capabilities, and a built-in WAV player. Missing features currently include client side image mapping, support for transparent GIFs, border and font size tags, and additional Netscape tags (frames, sub/superscript, and div tags, for example). For its purpose, I-View will impress many users, especially those with continual distribution needs, but there is a relatively stiff price to be paid for I-View. While the cost for one copy of I-View is just \$19.95, royalty-free licenses will set you back quite a bit more — the standard license is \$395 and the professional license is \$1295 (adds Win-CGI interface and free upgrades).

I-COMM

I-Comm is Talent Communications' full-featured WWW browser that, like SlipKnot, doesn't require a SLIP/PPP winsock connection in order to surf the web. The basic

I-COMM

i-comm

talentcom.co

Desc: A new web browser that doesn't require a SLIP/PPP connection

Pros: Web browser that doesn't require SLIP/PPP access; includes modem communications utilities

Cons: Lacks some of Netscape's better features and its overall speed

Location: <ftp://ftp.best.com/pub/icommm/>

Filename: icmm?????.zip

Status: Shareware - \$39.95 (Commercial) and \$29.95 (Non-Commercial)

Company: Talent Communications

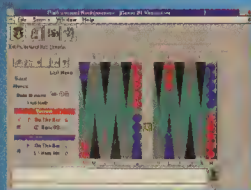
requirements for running I-Comm are your PC, Windows, a modem, and an Internet shell, VAX, or Freenet account. You'll also need to ensure that several necessary programs are identified in your shell account search path (check the I-Comm page — <http://www.talentcom.com/icommm.htm> — for more information on this). Once you have these essentials, you can get up and running on the Net with a solid browser that, while not in the same league as Netscape or Internet Explorer, does include a solid collection of important features. Support for tables, background images, interlaced GIFs, image maps (server side only), center and other advanced HTML tags, printing capabilities, and a built-in WAV player are just a few of the included features. I-Comm also includes a dial-up modem communications program, Zmodem transfer, and a phonebook utility in the package. Missing features in

this release include client side image mapping, support for transparent GIFs and multiple windows, border and font size tags, and additional Netscape tags (frames, sub/superscript, and div tags, for example).

You might notice that the included and missing features for I-Comm are very similar to those of I-View. I-View and I-Comm are both products of Talent Communications and exhibit many of the same features. While I-View is designed for offline HTML browsing only, I-Comm extends the utility factor tenfold by giving users without a SLIP/PPP connection access to the most popular area of the Internet. With only a few missing features, this is a godsend client for many of the previously forgotten netizens. SlipKnot runs a close second in this category, but I-Comm takes the crown for now due to its comprehensive collection of features and greater overall efficiency. SLIP/PPP, SLiRP, TIA, and Virtual TCP users, on the other hand, will likely find their needs best met by either Netscape or Internet Explorer, but I-Comm isn't very far behind. ♦

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BOOK BYTES by L. Detweiler

HTML CD for Windows: an Internet Publishing Toolkit

By Vivian Neou and Mimi Recker

311 pages, \$39.95

ISBN 0-13-232331-1

Prentice Hall; (800)-947-7700

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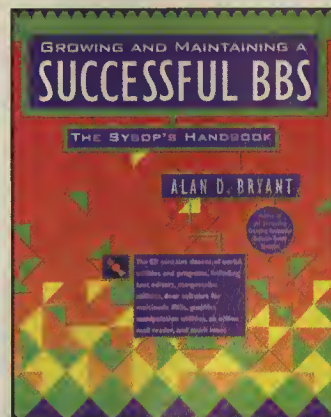
Increasingly the standard for computer books is to bundle them with software and CDs, such that the combination blurs almost into a software package with a manual. In pathological cases the CD is tacked on as an afterthought and, while complementing the book contents, is not referred to in the manual. Worse, the CD may be a disorganized hodgepodge of "stuff" and loose-ends that is relevant to the subject but provided in a disconnected disarray.

We're delighted to report that this classy book and CD collection is at the enviably accomplished end of the quality spectrum. As implied by the title, this work was commissioned from the start as a complete CD-book package in which the CD's contents are well organized, the selection is impeccable, strong value is added to the public domain utilities through an outstanding custom installation program, and the CD is tightly coupled to the book's contents. The focused, uncomplicated book layout is superb and the coverage is uniform and thorough. All of these factors are destined to make the HTML CD an instant hit and the definitive volume in this important publication niche. The highly polished end result is a graceful mix of technicality and straightforward "show and tell" that is both intellectually and aesthetically satisfying.

The CD contains an entire HTTP server and the book dedicates a chapter to its installation and operation. The CD also includes *HoTMetal*, "the industry's best known, most full-featured HTML editor" that even includes link verification; *HTML Assistant*; and the *Internet Assistant*, Microsoft's new Word 6 addin that builds web pages. *MapEdit*, an excellent image manipulation tool, and *Lview Pro* conversion utilities cover all the key areas of web design. An RTF to HTML converter is included, as well as a web form editor/generator, and a 30-day trial version of NetManage's *Internet Chameleon* (mentioned here in passing because all browsers only have a smidgeon of the market in comparison to Netscape). Finally, a batch of web page templates, HTML demonstration pages, form templates, and a collection of icons and images nicely round out the package.

The preface to the book contains a step-by-step guide through the installation process for the CD that allows full customization of installed modules. Many pages are dedicated to illustrating most of the CD utilities. There is good coverage of HTML3 and web forms. The style guidelines are crisp and sensible. The leaning of the book emphasizes more the teaching of HTML syntax than on automatic generators and converters, although the section on Editors, Converters, and Verifiers covers all their key capabilities. A cardboard quick-reference foldout is beautifully conceived and executed.

All the ingredients for a quality web site that rivals the best in visual interest and appeal are available if the reader adds the required patience and creativity. One of the most difficult and time-consuming parts of web design is just consolidating all the tools and knowledge. This compilation flattens the learning curve and eliminates the need for file-hunting forays. This quality package combines the very best, most rewarding attributes people seek in Web books and software.



Growing and Maintaining a Successful BBS: the SYSOP's Handbook

By Alan D. Bryant

352 pages, \$39.95

ISBN 0-201-48380-7

Addison-Wesley Publishing

(617)944-3700 x2278

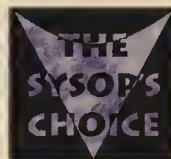
<http://www.aw.com/devpress>

includes CD ROM

Doug Shaker's "Beginner's Luck" column details some hapless misadventures and horror stories of BBS management by a neophyte sysop. With the existence of a book like this, no longer is ignorance



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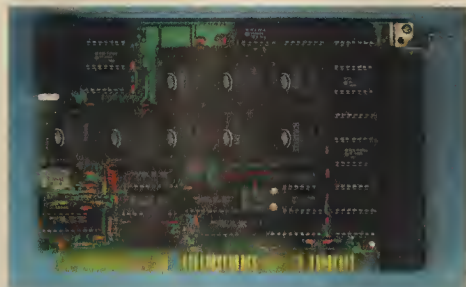
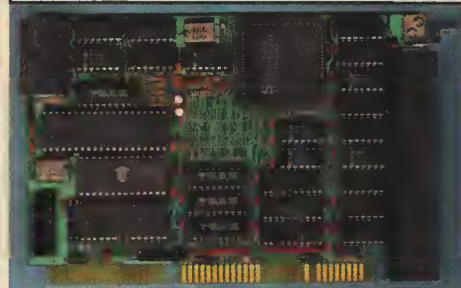
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any excuse. Of course BBS operation is never foolproof ("because fools are so ingenious" —Anonymous), but after reading this you will have filled your brain with the most state-of-the-art knowledge available on this exciting but sweat- and danger-laced endeavor. If a better, more relevant book for *Boardwatch* readers exists, we don't know of it.

This is the sequel to Bryant's book *Creating Successful Bulletin Board Systems*, which was highly regarded by the industry and in an earlier *Boardwatch* review. The new book is not intended as a replacement but as a complementary volume. "It's a crowded online landscape, and what may have worked with a BBS two years ago won't cut it any longer with Web-aware, Internet savvy BBS users." With that in mind, Bryant has several chapters related to BBS-Internet capabilities and issues: partial or full Internet connections, routing, terminal servers, SLIP, PPP, WWW, newsfeeds, etc.

The book's approach is from the highly professional side, beyond that of the casual hobbyist, and in general focuses on the more abstract, intangible hur-

dles on the road to BBS success than on purely technical areas such as software. The earlier chapters have a lot of highly concrete suggestions for analyzing BBS success and formulating successful and moneymaking game plans. An entire chapter on "Cutting Your Losses" considers how to reorient, revitalize or resuscitate a dying BBS effort. Bryant emphasizes marketing strategies and analyzing critically the growth and success of a BBS as a self-sustaining business. Other chapters are concerned with linking an existing business to a BBS, or selling information through online databases.

The CD seems to be an incongruous afterthought to the book, considering that the book does not at all emphasize software. A more paranoid reviewer might suspect that it was included partly to increase the purchase price. Considering the cost that a bundled CD adds to the book, we'd like to see a bit more justification for its rationale and expostulation of its contents than a few paragraphs in the introduction and a single 3 page appendix; it seems the CD is more logically bundled with the first book or separately.

The only quibbling weakness of the book is that it does not consider individual vendors or software packages in any depth; perhaps the reader should consult the first book for better coverage. (However the bewildering array of different BBS software is daunting and innovation is extremely fast and the area is probably best not tackled in print. Operators who are starting a BBS are well advised to go to BBS shows to compare the capabilities of the software instead of attempting to make a decision any other way.) Overall the book is unique and unrivaled in its coverage, has strong value, and will perhaps be priceless to some in its audience. ♦



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Frank X. Sowa

CLINTON'S BRAVE NEW WORLD

In recent weeks, a U.S. national security "master-plan" for cyberspace has been evolving, and it places the future of online system operators' rights, and an individual users' rights to privacy — a Constitutionally-protected Basic Human Right, in the middle of the debate. It also moves all U.S. online technology advances back by at least ten years, so that the rest of the world can catch up economically, and perhaps even overtake us by the turn of the century. First the latest saga on the old news ...

THE COMMUNICATIONS ACT OF 1995 MAKES SYSOPS CRIMINALLY LIABLE

Congress, as I write this, has been in closed sessions working to resolve the differences between the House and Senate versions of the Communications Act of 1995, also known as the Telecommunications Deregulation and Compensation Act. The Administration and the Departments of Justice, Defense and Commerce have also been hard at work. All of these factions have been working on a comprehensive approach to telecommunications that was expected to be revealed to the public in December, during the holiday season.

In the Congressional debate, Sen. James Exon, the stalwart campaigner against "cyberporn" (even though he doesn't even use a computer), has positioned himself as a leading member of the debating committee, stacking the deck to ensure passage of sweeping regulations "to impose stiff penalties for anyone who uses a computer to import or communicate any 'obscene or indecent' communication — including any information on the subject of abortion."

For example, saying "screw you" is legally acceptable, though garish, in a magazine like this. In an e-mail message between friends online — if this version of the bill has passed — it is criminally illegal. In this example, it would allow for the FBI to come in and seize all of your BBS equipment, place you in jail, and impose stiff fines, because, you, as sysop, are just as liable under this new law, as are those who shared the e-mail.

According to the Association of Online Professionals, Executive Director Dave McClure, "This broad and sweeping language would hold system operators and other online professionals liable for information posted on their systems and servers." AOP is requesting that all BBS users and online professionals write to members of Congress on the conference committee to

reject the Exon language in Section 402 of the Senate Version of the Communications Act, and to reject amendments 1462 and 1465 of the House version.

FBI TARGETS BULLETIN BOARDS

Ahh, but you say, "Hey man, I just run a hobby board! The government's not going to worry about little old me." If you think you are too small to capture the attention of a federal government, you are wrong. On October 16, the FBI published its proposal to add to an existing national wiretapping system, giving it unprecedented size and scope that would allow law enforcement officials and others in government the capacity to monitor one in every 100 phone lines simultaneously. Their primary targets: high crime areas and online BBSs.

FBI officials contend that they need such an advanced, high-capacity monitoring system to control crime as more and more businesses and homes tap into cyberspace, "carrying on computer conversations over digital phone lines." The FBI doesn't intend to be caught without the ability to carry out its functions as the nation's watchdog.

Carrying on the G-Man tradition of J. Edgar Hoover's FBI, the "new" FBI is surfing the net, and monitoring cyberspace in a big way "to capture commercial software pirates, copyright infringers, cyberporn promoters, child porn sickos, drug cartels, anti-abortion extremists, tax dodgers, militias, terrorists, international spies, online gamblers, hackers, crackers, anti-government groups, anti-gay groups, and most other anti-social activities" that take place in the "privacy" of the telephone system and your desktop computer. "This is absolutely essential for law enforcement and public safety," said Mike Kortan, an FBI spokesman in Washington. In reality, it is not all that different from the many well-documented cases of wiretaps that were used abusively by the Johnson and Nixon Administrations against civil-rights activists and anti-war protesters in the 1960's and 70's.

Even government analysts admit that such a surveillance ability would vastly exceed the current needs of law enforcement officials around the country. "The proposal calls for nearly one million passive-monitoring devices installed at switching stations nationwide by the end of 1996, so that the FBI has the capacity to monitor one-tenth of one-percent of the U.S. population," reports have stated. (This is in comparison to a current average of 850 wiretaps installed nationwide each year, over

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the last 10 years, according to the FBI's own statistics.)

And, if you think that legitimate activities may be beyond Big Brother's reach, think again. Just a few months ago, the *New York Times* broke a story how this Administration, along with the Department of Commerce listened in on discussions by Japanese negotiators during the auto talks. The Clinton Administration already has demanded a shift in the intelligence community to focus on domestic and foreign economic spying. What is to stop an empowered FBI and government (as well as long-distance carriers who have the eavesdropping equipment installed on their networks) from abusing the privileges, and use such a listening network to monopolize information for the benefit of certain companies at the expense of others?

The feelings within the Clinton Administration — and of the President himself — regarding the government's ability to invade the individual's privacy have been no secret. Caught up in the emotion surrounding the Oklahoma City bombing, the Administration earlier this year sought to expand the FBI's wiretapping authority — and eliminate all forms of encryption except those that are "certified" by the federal government — in a sweeping anti-terrorist bill that should have raised public outcry.

But, Congress passed a number of laws without public outcry — that already provide the FBI with more sweeping online powers than they ever had in previous administrations. And, this time around — in spite of the hype of a conservative Congress and a liberal president — will be no different! "The only debate that will occur in Congress on this one," a junior aide in Sen. Rick Santorum's office joked with me, "is whether or not the new budget will have the money to pay for such an extravagant approach."

According to their own profiling approaches, the FBI sees the typical online criminal in his or her early to mid twenties, some teenagers, almost assuredly under 50, desiring to flout their intellectual muscles in cyberspace to see what they can get away with. But, the FBI is also paranoid about another profile in cyberspace — that of the professional cybercrook. These crooks partake in what the government has dubbed "Information Warfare," and it is these criminals who are the larger concern to all in the defense, intelli-

gence, and law enforcement circles. According to a defense analyst, "These people, who have the capability to dream up information warfare schemes, are law enforcement's primary target in cyberspace — but, hey, to justify the expense, it doesn't hurt to bring in others involved in criminal activities as well."

DEFENSE AUTHORIZATION BILL TAKES "NATIONAL SECURITY" TO CYBERSPACE

Of course, to be a "real" threat, beyond the reach of civil liberties to touch it, a President has to sign an Executive Order declaring the threat to be a "national security" issue. Then, the government can do just about anything it wants without having to give any reason — but to state they are protecting "national security." In 1988, during the Bush Administration, then Gen. Colin Powell visited with Alvin and Heidi Toffler (two well-known futurists) in New York City to begin an investigation into how the "Power Shift" into an Information Age might affect "national security issues." It was the Tofflers who coined the phrase "Information Warfare," the purposeful attack of the information infrastructure by well-funded foreign agents.

The term stuck, and throughout the last few years, Toffler's vision, along with that of many more futurists, built the foundation of a combined Department of Defense and Intelligence Community mandate to "secure cyberspace, and control its activities, at all costs." Early in the program, there were many who thought that such an undertaking was defensible, a concept that is still a widely-held belief within Congress, and the Clinton Administration. But, earlier this year, the defense planners came to the realization that "given that it is not possible to control the state of a globally interconnected information infrastructure, we must determine how to design and control information services that can operate in this inherently unsafe environment ... and this will require fundamental changes in the government's approach to designing and operating an infrastructure."

THE GLOBAL INFORMATION WAR HAS ALREADY BEGUN!

In the feds view of the world today, the cyberspace conflict has already begun. "The total vulnerability of the nation's communications infrastruc-

ture demands that the National Information Infrastructure (NII) be made a top 'national security' priority, (which it recently was by a Clinton Executive Order), and that immediate actions be taken to assure that the reliability of the commercial information infrastructure, primarily the Internet, is not undermined." Clinton's recent threats to Congress, that he would veto any telephony act that allows other companies beyond AT&T into the long distance business, is in part, a response to the new national security status of NII, and AT&T's voluntary contribution to secure the Net, as well as provide linkages within all education facilities.

The feds, as they presented in white papers at InfoWarCon95 in September, believe that the trillion-dollar potential of Internet Commerce will attract the most sordid group of attackers who will engage in wars "primarily through the manipulation, distortion, and suppression of information." Proponents cite the recent online attacks by a Russian scientist with inside connections at the bank, to manipulate money out of Citicorp, as a prime example of "just how bad things have become in cyberspace."

An amendment to the recently passed Senate Defense Authorization Bill requires that the administration produce a "comprehensive plan to detect attacks on the NII." Defense officials hope the new national security status of the issue, along with the Senate Amendment, and a growing campaign to make companies aware of how security breaches destroy their bottom lines, will "shift the national debate away from privacy and regulation issues, and will give more attention to the more probable, crippling effects of data integrity and denial of service."

THE DEFENSE DEPARTMENT IS CREATING AND WORKING TO COUNTER EXOTIC WEAPONRY ON THE INTERNET

The Defense Department is already in the process of finding ways to defend and attack through the Internet from, and using, directed energy beams that fry transmission methods (even wireless), computer logic bombs and viruses, altered media images that distort perceptions of reality for propaganda purposes, and other psychological operations to influence the belief systems of peoples, and through that, the resolve of their leaders.

"The information age is sweeping aside the physical and political barriers that once formed the bulwark of U.S. national security and is exposing the fact that we, as a nation, are poorly prepared for intense global competition in cyberspace," said Col. Alan D. Campen, in a recent issue of National Defense magazine. Campen is a former director of Computer/Command/Control policy in the office of the Undersecretary of Defense, and a current lecturer at the National Defense University.

But, "in an era of global competition dominated by a struggle for supremacy over knowledge, a contest that will penalize nations that depend on telecommunications and computer systems, the federal establishment and private interests must work together in controlling the flow and content of information; and in the area of information security," said Campen.

MORE CONTROLS, INVASION OF PRIVACY, AND STIFF ONLINE SERVICE REGULATIONS

As I have reported in previous months, the Administration is hell-bent on "deputizing" system operators to be the

"town constables" of cyberspace and report illegal activity to the proper authorities. The Administration plans to carry this out through NII, FCC regulations and BBS licensing fees, and "compliance standards" to be met. This in and of itself, wouldn't be so awful, if it didn't create a sizable burden on the small operator — to the advantage of the monopolized private behemoths, who would like to eliminate all small competition. Small businesses, according to studies by the SBA, are already overburdened, to the benefit of large corporations, with unwieldy regulation. This would make the garage start-up of a BBS beyond the reach of most who have the dream of starting one. In an information society, this would have a terrible effect on the economy, and actually aid the foreign competitors the feds say they are trying to stop.

It also wouldn't be so bad, if the policing activities stopped at the sysop level, within the small BBS communities, rather than having Big Brother — the FBI, and the Intelligence Communities — looking over our shoulders and passively invading online privacy at will, and monitoring activities without legal warrant. (For years, law enforcers have

had the ability to use wiretaps at will, to follow up on community activities — as long as they used such taps passively and privately, and never used the data collected in a court of law to incriminate a defendant. This is well-documented, as in many cases, this has been the evidence of suspicion brought to circuit judges to obtain a legal wiretapping warrant. Law enforcement already also uses aliases to snoop around on BBSs.)

The federal plans being forwarded seem to continue to be one of top-down management of cyberspace — as impossible and improbable as that sounds — funneling all activity through a few selected private-sector service providers who will agree to have full scale government monitoring of all traffic passing over their portion of the net. It seems to set-aside any consideration for privacy or for other civil-liberties — moving instead to promote a socialized centrally-controlled military-industrial policy, run by politically-correct bureaucrats at the expense of a free-market, democratic system. And, how does one keep the reins held tightly with such government controls in a global network? (Brave New World and Rollerball, here we come!) ♦

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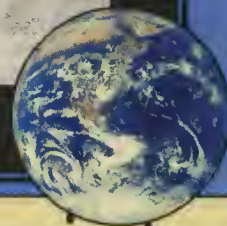
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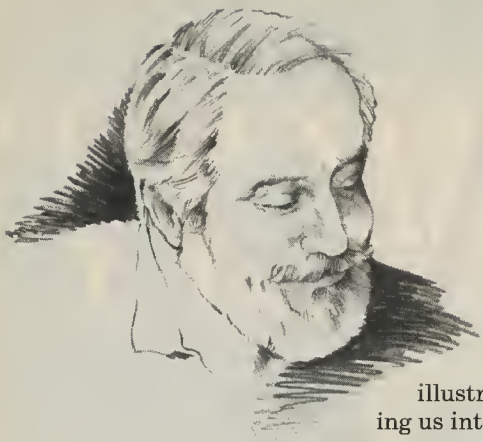
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GOVERNMENT ACCESS by Jim Warren

SUBSTANTIVE ONLINE PRESIDENTIAL DEBATES

It's time for the presidential candidates to substantively illustrate that they are capable of taking us into the 21st Century.

It's time for the candidates to "participate" in online debates, as well as after the parties choose our only alternatives for the November general elections.

We need debates before the primaries in the large high-tech states — e.g., California's primary is March 26th.

[In 1992, I proposed this, but (1) I got started late in the primary season, (2) almost none of them had any online presence — interestingly including Mr. Electronic Data Systems, Ross Perot, and (3) most candidates and their staffs didn't have the vaguest idea what the net was. California's quixotic ex-governor, Mr. 1-800 Jerry Brown, was the first candidate to have an online presence, and the only one with two full-time paid staffers maintaining that presence — on the Internet as well as the major commercial services. The others essentially ignored the net.]

This column concerns (1) how and why to get nationally recognized candidates to debate online, and (2) some operational specifics.

NO SCHEDULE CONFLICTS

Debating online voids the biggest excuse that politicians use to dodge facing their opponents.

One of the most important points to emphasize to naive candidates, campaign managers and their press secretaries is that online debates allow candidates to participate from different places, at different times, during odd moments at their convenience.

They need to understand that most online discussions neither require or expect the participants to be online at the same time — that live interaction is inefficient and the exception; mostly used for low-content chit-chat.

They also need to understand that, claiming "schedule conflicts" as reason for not debating their opponents, (1) will be widely circulated and ridiculed all over the net, and (2) will be seen as arrogant refusal to face their opponents in substantive discussion of the issues.

Candidates can make their statements, and pose and respond to questions from anywhere, at any time of the day or night, within a day or two. If they can't do

that during a campaign, then they are obviously not competent to run the country!

Candidates need to understand that there are no "schedule conflicts" in cyberspace.

TYPING SKILLS UNNEEDED

Candidates and their campaign organizers also need to understand that the candidates, themselves, don't need to know anything about computing or typing, and probably shouldn't even touch a keyboard. Viable candidates for President have typists; they shouldn't waste time doing their own typing!

Aside: In 1992, Jerry Brown got national print and TV coverage when he went into a CompuServe interactive/live forum for part of an hour. It was painful! Slow, hesitant keystrokes. Typos galore. Minimal content. Gallant try, but little substance. This is not how to have a presidential debate. It was nothing more than a [effective] publicity stunt.

Online debates can be implemented (details below) so each candidate has a fair opportunity to state positions, ask questions and give thoughtful, substantive responses, without typing, themselves.

Moreover, they can — and should — be free to consult with advisors and experts before each statement and response. We hope our elected representatives seek expert advice before they adopt substantive positions — and it's perfectly legitimate for them to do so when presenting their views to the nation.

Face-to-face debates may be cute and entertaining, but we need more than that for selecting our nation's decision-makers!

GETTING THIS STARTED

The front-runners will likely refuse to participate. Initially. (Well, they won't refuse. Either they won't respond at all, or they will "check their schedules.")

To hell with the media's favorites. We don't need 'em to get online prexy debates started:

The other candidates are desperately seeking public exposure. Some are even willing to risk making substantive statements about their positions. (The others aren't worth our attention.)

We can invite all candidates to debate — but push hardest on those who are getting little publicity, who are thus most likely to agree to almost any

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Warren has received the Dvorak Lifetime Achievement Award (1995), the Hugh M. Hefner First-Amendment Award (1994), the James Madison Freedom-of-Information (1994) for his efforts to open online access to government, and the Electronic Frontier Foundation's Pioneer Award (1992). He founded InfoWorld and the Computers, Freedom & Privacy conferences (1991); was founding host of PBS television's "Computer Chronicles" (1981) and founding Editor of *Dr. Dobbs' Journal of Computing* (1976).

opportunity for exposure (and have the least to lose).

(In my 1992 efforts, candidates from the "not a chance" parties were the first ones agreeing to online debates. But now, we have more candidates in the Republican primary, alone, as of this column's November deadline, than we had for all of the also-ran parties in '92!)

As soon as we get two or three nationally known candidates to agree to debate online — without waiting for any other candidates — we can set a date and ground-rules acceptable to the agreeable candidates, and merely keep all the "disagreeable" candidates informed.

An online debate between SOME of the nationally-recognized candidates is worth doing. From their viewpoint, it's good exposure and will grab press coverage. From the public's viewpoint, it's a helluva lot more information than we would ever otherwise receive from those candidates.

COORDINATING PROGRESS

I will push this online, and will help however I can. I'll post contact details, progress reports, planning announcements, etc., to my GovAccess e-mail listserv on the WELL (send a 'subscribe' request to <mailto:Majordomo@well.com> or <mailto:jwarren@well.com>).

If/when some candidates commit to an online debate, we/they should set up an independent operations listserv. (This ain't my party; it's theirs. I'm just the provocative [gad]fly on the wall.)

OPERATIONAL DETAILS

The participating candidates (actually, their campaign organizers) will agree to a time-period for the debate. I suggest two weeks, ending no earlier than two weeks before some major primary (perhaps March 15th?, he sez provincially).

They may prefer to debate without outside questioners, or they may agree to a panel of questioners — probably reporters and newscasters. (Whether we like it or not, they will structure the debate and its questioners as they wish.)

As a starting point, I propose that the online debate(s) operate as follows:

Set up two regular moderated USENET newsgroups (not "alt" groups) with a moderator acceptable to all candidates — one newsgroup for

limited-length debate postings; the other for longer supplementary materials from the candidates. Note that Netscape's Web-browser helps in reading newsgroups.

The moderator's only function will be to promptly post each candidates' submissions after verifying that they (1) meet all agreed-upon debate rules, (2) came from a candidate's organization and (3) are approved as the candidate's personal statement (verified by fax or phone, for security).

Rules for the debate forum might be that each candidate can post per day, at most, (a) one comment, plus (b) one question or allegation, plus (c) one response to each question/allegation posed by each other candidate — with each comment, question/allegation and response being limited to, say, 160 characters (20 lines x 80 characters). This will make the debate newsgroup palatable to readers.

Candidates could post longer, but still length-limited, responses to the supplementary newsgroup. And they could point to additional materials on file-servers or Web-sites of their own.

A third moderated newsgroup could be limited to established political reporters from major media, say, newspapers with more than 100,000 daily circulation and news-anchors from stations with some defined "large" ratings. Length limits could also be applied.

Finally, there would be an unmoderated newsgroup in which anyone could post anything — hopefully somehow relating to the debate issues, and — of course — anyone would be free to set up their own self-moderated parallel discussion group, independently.

This outline is certain to change, if/as debate(s) become likely.

NON-PREXY CANDIDATES

Many congressional candidates, some candidates for state office — legislative and gubernatorial — and even some candidates for local office are setting up various online campaigns.

Why don't you organize exactly the same kind of online debates among congressional, state and local candidates — at least in the more populous states and major metropolitan areas, especially those that have established civic nets.

WE NEED YOU!

WE, who are online, are the only ones who can make this happen.

It will take many of us pugnaciously pushing it. They certainly won't initiate anything substantive. If we lead effectively, then exposure-seeking politicians will follow.

Remember Intel's math error? Or the Clipper chip controversy? They had no media coverage — until they were so widely discussed online, that the public media finally picked up the stories.

WE can do the same for online prexy debates. Those who care about who leads the United States into the next century, can:

Propose and discuss, in online forums, the idea of having online prexy debates — on all available BBSs, as well as the commercial services and USENET. Not just in political forums, but also in every discussion area that could be impacted by government policy, legislation or federal funding!

The novelty of this idea is newsworthy — at least as a curiosity for its quirkiness and David vs. Goliath grassroots style.

Politicians follow the press. Awaken the print press:

Write letters to the editors of your daily and weekly newspapers. Phone them first, and ask what length letters they prefer.

Every time you read about a candidate commenting on any high-tech issue or policy, send a letter to the editor hinged on the article, but proposing that all the candidates debate these and other issues, online.

Phone and write brief letters to your newspapers' political columnists and "community tidbits" columnists.

Do the same for the "Letters" columns of your favorite news and business magazines.

Do the same in your trade periodicals — e.g. computing, legal, education, environment, real estate, transportation, etc. (What trade or profession isn't impacted by government?!)

Titillate radio call-in talk shows:

Even if you normally avoid them — or

you oppose a talk-show host's political views — call 'em. (What talk-show host would be against giving the public a better chance to find out more of candidates' positions in a debate?)

Propose that we drag politicians online, where substance is more important than coiffure. (Be prepared to concisely describe, in lay terms, how online forums operate.)

Point out that most candidates are only putting up their canned puff-pieces and dog-n'-kids propaganda pictures on Web pages. As such, candidates are avoiding the hard questions — just more pretty faces.

Point out that they are totally avoiding any dialogue or debate, online — even though the medium is ideal for such substantive exchange.

Send copies of this to candidates, newspapers, talk-show hosts, etc. (You may wish to omit this final section. Or, you may not — we will most-certainly be circulating this and similar details online, where numerous online members of the press will see them.) ♦

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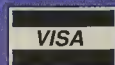
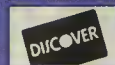
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LEGALLY ONLINE

by Lance Rose, Esq.

Online Gambling: Killer App or Sucker Bet?

Lance Rose, Esq. is Of Counsel to Lewis and Roca in Phoenix, AZ, and Co-chair of its Intellectual Property and Technology Group. He can be found on the Internet at <mailto:elrose@well.com> and on CompuServe at 72230,2044. He is also author of *NetLaw*, the online legal guide, published by Osborne/McGraw-Hill and available at better book stores everywhere.

Online casinos arrived in force in the year 1995, throwing open their virtual gaming tables to a thrill-hungry Net populace. Observers say they'll be a big success, based on the theory that any vice we can indulge online is sure to do good business. The smart money is on gambling operations easily reached via the World Wide Web, but based offshore on exotic foreign islands, safe from U.S. officials and courts. Go on the Web today, and you'll find SportBet, Global Casino, and other Web sites ready to take your credit information, then hustle you to the nearest virtual gaming tables and sport book areas.

But is this really the smartest course? After all, there are laws regulating gambling in this country. For instance, Title 18, Section 1084 of the U.S. Code makes it illegal to gamble over the telephone lines, unless it is permitted in your state. In addition, Sections 1301, 1302 and 1304 regulate various aspects of lottery operations. Violating these laws can lead to both misdemeanor and felony convictions.

"Putting the [gambling] organization out of reach of the U.S. courts will not stop dedicated law enforcers. They will simply go after the individual customers."

While the laws tend to focus on the gambler and not the gambling house, they can readily be used by the authorities to shut down illicit operations. When a group encourages others to perform illegal acts, it can be guilty of "aiding and abetting" the commission of a criminal act, which of course is itself a crime. And putting the organization out of reach of the U.S. courts will not stop dedicated law enforcers. They will simply go after the individual customers. This was demonstrated convincingly a couple of years ago in "Operation Long Arm," where Customs agents raided several dozen U.S. homes and businesses suspected of downloading child pornography from computer bulletin boards based in Denmark. The BBSs were out of reach, but authorities were comfortable that a well-publicized raid against users of those systems would discourage others from thinking that getting their kiddie porn offshore was a safe bet.

The states are also beginning to focus on gambling online, and they don't like it. For example, the attorney general of Minnesota recently circulated the following statement on the Net (excerpts reproduced

here; the full text can be found at <http://www.state.mn.us/ebranch/ag/memo.txt>):

EXCERPTS FROM MINNESOTA ATTORNEY GENERAL'S STATEMENT ON INTERNET GAMBLING

An Example Of Illegal Activity On The Internet - Gambling

Gambling appears to be an especially prominent aspect of criminal activity on the Internet. There are a number of services outside of Minnesota that offer Minnesota residents the opportunity to place bets on sporting events, purchase lottery tickets, and participate in simulated casino games. These services are illegal in Minnesota.

Lotteries

A lottery is defined as "a plan which provides for the distribution of money, property or other reward or benefit to persons selected by chance from among participants some or all of whom have given a consideration for the chance of being selected." Minnesota Statute Section 609.75, Subdivision 1(a) (1994).

Generally, it is unlawful in Minnesota to sell or transfer a chance to participate in a lottery. It is also unlawful to disseminate information in Minnesota about a lottery, except a lottery conducted by an adjoining state, with intent to encourage participation therein. Acts in Minnesota in furtherance of a lottery conducted outside of Minnesota are included, notwithstanding its validity where conducted. Violation of these provisions is a misdemeanor, punishable by up to 90 days in jail, or a fine of up to \$700, or both. It is a gross misdemeanor under Minnesota law to conduct a lottery. A gross misdemeanor is punishable by up to one year in jail, or a \$3,000 fine, or both.

Sports Bookmaking

Sports bookmaking is defined as "the activity of intentionally receiving, recording or forwarding within any 30-day period more than five bets, or offers to bet, that total more than \$2,500 on any one or more sporting events. Engaging in sports bookmaking is a felony, which is punishable by more than one year imprisonment. Intentionally receiving, recording, or forwarding bets or offers to bet in lesser amounts is a gross misdemeanor.

Accomplice Liability

Minnesota's accomplice statute provides that one who intentionally aids, advises, counsels, or conspires with another to commit a crime is equally liable for that crime. Minnesota Statute Section 609.05, Subdivision 1 (1994). Therefore, persons or organizations who knowingly assist Internet gambling organizations in any unlawful activity may themselves be held liable for that unlawful activity. [Emphasis added. - Ed.] Thus, for example, Internet access providers and credit card companies that continue to provide services to gambling organizations after notice that the activities of the organizations are illegal would be subject to accomplice liability.

Placing A Bet Through Internet Gambling Organizations

Minnesota residents should be aware that it is unlawful to make a bet through Internet gambling organizations. Minnesota law makes it a misdemeanor to place a bet unless done pursuant to an exempted, state-regulated activity, such as licensed charitable gambling or the state lottery. Minnesota Statute Sections 609.75, Subdivisions 2 - 3; 609.755(1) (1994). The Internet gambling organizations are not exempted. Therefore, any person in Minnesota [Emphasis added. - Ed.] who places a bet through one of these organizations is committing a crime.

Please direct any inquiries regarding this notice, or report violations of Minnesota law to the Law Enforcement Section, Minnesota Attorney General's Office, Suite 1400, NCL Tower, 445 Minnesota Street, St. Paul, Minnesota 55101-2131, telephone (612) 296-7575.

That's some serious talk. But is Minnesota just blowing smoke? When it comes to the hard work of finding gamblers and shutting them down, will Minnesota and other states with similar attitudes bite as hard as they bark? Or will they let a certain known amount of online gambling go without serious enforcement?

Most likely, the states will strike out against gambling, and hard. One of the big threats to state economies in recent years has been the increasing ease with which citizens can send cash and credit over the phone lines, through wire transfers, telephone ordering using credit cards, and a number of other

means (long predating the newfangled Web payment mechanisms now being proposed). The fear is that some state or foreign government may figure out a way to encourage people across the country to send money in its direction,

"Online gambling is merely the latest arena in which the war against outgoing state funds will be fought, a war where states are fighting for their very existence."

such as through its bank regulation laws, making that government richer and all the rest poorer. In the past, the high cost of transporting physical money out of state tended to keep the money flow down, especially on the consumer level. Now, the states are fighting a desperate battle to keep their citizens' electronic money within state borders. Online gambling is merely the latest arena in which the war against outgoing state funds will be fought, a war where states are fighting for their very existence.

Consider also the traditional and changing state attitudes toward gambling. States vary widely in their approaches to the question, but there are three main regulatory regimes. The first is to outlaw gambling (or certain forms), because it is considered immoral or socially undesirable, inhabiting the same dark corner of the human soul as drugs and prostitution. Another is to permit gambling, but solely at state-authorized franchises such as casinos and racetracks. Here, the state gets to regulate as necessary to prevent what are considered the unsavory aspects of the gambling industry, while permitting the operation of businesses that encourage large numbers of people to spend large numbers of entertainment dollars. The third regime, which is becoming very popular, is where the state throws moralistic concerns to the wind and runs its own gambling concessions. State lotteries are ubiquitous, trading on the masses' false hopes of striking it rich and escaping their dreary broom pushing lives, while bringing in millions to offset the steadily dwindling federal contributions to the state revenue base.

None of these state regulatory regimes is friendly to offshore gambling businesses. States who look to make money

off their own citizens' gambling will view outside, Internet-based gambling businesses as direct competitors, and do everything just this side of legal to cut them off. The few states still clinging to morals-based gambling regulations will scarcely be any happier when they discover offshore reprobates slinking in through the Internet, luring their citizens into committing sins on the modem.

If online gambling operations continue to appear and expand, do not be surprised if some states threaten the very existence of any in-state phone company or online service provider that does not somehow filter out the gambling. The veiled threat to do just that is clear from the Minnesota attorney general statement quoted above. An attorney for one of the major long distance telephone companies has also stated that they received behind-the-scenes warnings against permitting online gambling from law enforcers of a couple of dozen states. Common carrier status notwithstanding, the states will tear phone companies apart wire by wire if necessary to keep gambling dollars close to home. And telephone companies, if subjected to such pressure by the states, will readily turn around and filter all Web-based and other online gambling operations so that users in the U.S. will have to go deep underground to find any online betting action.

So why do we see so much gambling activity starting up? If online gambling without government blessing is so illegal, and if the states are so strongly motivated to strike it down, then why are so many online service providers, so many investors (whom we normally expect to be prudent), and so many gamblers getting into it? There's a combination of likely reasons:

- (1) no one's been raided, indicted or arrested for it yet;
- (2) there's so much money to be made in online gambling that it seems to make sense to set up such operations despite the risks of legal enforcement; and
- (3) online gamblers and gambling houses alike are highly impressed with the fact that offshore-based operations can not easily be directly reached by U.S. law enforcers.

Such "reasoning" might give psychological comfort to those who want online gambling to succeed, but anyone betting on the continued open operation of

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- ☐ 9600 baud modems and higher dial (304) 243-2560

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- ☐ Ftp iron.nttc.edu, login as anonymous
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online gambling may be heading for disaster. Customers and conduits can and will be shut down. In addition, if there are any knowing U.S.-based investors and other participants in such ventures, it is likely that U.S. courts would have jurisdiction over them, no matter what foreign country happens to harbor their Internet gambling server. The idea that online activities occur on some new, unstoppable frontier is getting old and tired. For as socially provocative an activity as gambling, expect land-based governments of all sorts to muscle in on the action.

Does this mean online gambling is dead in the water? No, but it does mean the get-rich-quick gambling schemes out there have a good chance of failing in their current form, leaving a trail of lost investments and, possibly, jail terms, fines and criminal records for the unfortunate losers caught in the act. Despite the current gambling hype on the Web, gambling online should eventually reflect the traditional choice we already had in the pre-Web world: you can gamble openly in state-authorized settings, or you can find illegal gambling parlors or bookies and do it outside the law. ♦



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This Is True™

by Randy Cassingham

Dougie Houser, The Miniseries: Michael Kearney is 11 years old, and has a "300-plus" IQ. He has already graduated from college, and is now pursuing an advanced degree at Middle Tennessee State University. A kid this smart must have some plans for the future. "He could be Mozart, Einstein. We have no idea," says his father, Kevin, who educated Michael at home. "Right now he wants to be a game show host." (AP) ...*This may be all the proof we need that TVs in classrooms is a bad idea.*

Close Encounters: Ireland's recent vote on whether to make divorce legal again led to a lot of interesting statistics. "There are 63 percent more UFO sightings in countries with divorce," claimed a poster for the "no" side. "Yes" won with a slight margin. (Reuters) ...*Now we'll never know if they wanted their freedom, or just aspire to see a flying saucer.*

Culture Club: Larry Harris has pled guilty to one count of wire fraud. According to the U.S. Attorney in Columbus, Ohio, Harris falsely claimed he was certified to handle bubonic plague when he mail-ordered a freeze-dried sample of the bacteria from a culture lab. The lab sent the sample, but then turned him in after they got suspicious. Harris, who faces up to six months in jail, wanted the sample as part of his research for a book he was writing about germ warfare, his attorney said. (AP) ...*Makes you wonder what Steven King has in his basement, doesn't it?*

Ugly Waxy Buildup: Madame Tussaud's Wax Museum in London has found the depictions of torture and murder in its Chamber of Horrors aren't graphic enough, so they're updating it to make it more gory. "Children in particular now seem to see far more horrific things on television, so we are totally redoing the chamber," a spokeswoman said. (Reuters) ...*A few more years of this, and they won't even react to the real thing. Just like American kids.*

Not in Kansas Anymore: Researchers at the University of Oklahoma have started a study of the way tornados carry debris away from the ground. Historical reports show that paper can be carried more than 200 miles before settling back to earth. But records of such events are sparse, and those they have found "you have to take with a grain of salt," one researcher said. So why bother? They want to create a model "that would be of use to forecasters if a tornado were to hit a hazardous waste site," she said. They have compiled a number of interesting reports so far. A cow was thrown 10 miles in 1878, a pillow went 20 miles in 1913, a jar of pickles travelled 18 miles in 1917, and, in one 1953 storm, trousers went 30 miles and a wedding gown a full 50 miles. (AP) ...*Yes, but they had a head start since they were thrown, not just carried off.*

Sniff This: Despite claims that children were not eating their food-scented crayons, the Crayola crayon company has substituted new non-food scents in their markers this year. But an informal test found that children don't agree with the company's descriptions of the odors: the "cedar chest" crayon, for instance, smells instead like "fire" or "DNA" or "dog doo", the "daffodil" is more like "the inside of an airplane", and "leather jacket" more akin to "dead worms", the children said. (Newsweek) ...*Better retest: DNA doesn't smell anything like a fire.*

Would You Like Fries With That? "A pound of termites has more nutrients than a pound of beef or pork," says Frank French of Georgia Southern University. He teaches his students that there are more food sources around them than they think. Students are urged to create new recipes using foods such as wild plants, but more points are given if the students use bugs. The catch: students have to eat their creations as part of their assignment. French doesn't shirk his responsibilities: he eats them too. He notes that roast crickets, for instance, "taste like a fat-laden hors d'oeuvre." However, "the legs aren't very palatable, and the heads are quite objectionable." (AP) ...*Mostly, the students learn that the "mystery meat" in the cafeteria may not be so bad after all.*

Hot Spot: Belmont Abbey, near Hereford, England, closed its school for boys last year, leaving the 25 monks with little to do, and the bills piling up to maintain their large buildings. To bring in some cash, they've decided to rent the refectory out for dinner dances and disco nights. But "I don't think any rave-ups will be the order of the day," cautions one of the monks. "We don't want to jeopardize the tranquil nature of our life. Most of our monks will be tucked up in bed" during the parties, he said. (Reuters) ...*Father, isn't that just the sort of party you didn't want?*

Chill Out: Two stowaways hoping for free passage from Cape Town, South Africa, to Europe aboard a Norwegian freighter should have read the side of the boat. The "Polar Queen" wasn't enroute to Europe, but to Antarctica. "Not in their wildest dreams had they imagined ending up on the South Pole ice," a ship's officer told a newspaper. "I think it was quite an unusual experience for them." After two weeks, the freighter again sails — back to Cape Town. (AP) ...*There is nothing — absolutely nothing — half so much worth doing as simply messing about in boats.* — Ken Grahame

Inside Job: "Prison Loses Master Key for Cells" — Reuter headline

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FAMOUS LAST WORDS

It is profoundly gratifying to catch someone else in the wrong. The pleasure may emanate from our drive to dominate others — “you’re **WRONG** about this and I’m not, so I’m superior to you in this and every other way.” Also, people with inferiority complexes may find it therapeutic to learn that others occasionally screw up too.

Whatever its origin, the joy of finding fault in others is intense and widespread. Many online conferences would be virtually inactive were it not for people pointing out each others’ mistakes. Our Letters section attracts its share of nit-pickers. Those insufferable twits who provide unsolicited grammar and spelling lessons are another example.

The bigger the mistake and the authority of its perpetrator, the more intense is our pleasure in learning of them. Reader Jim Turner — mailto:inquest@aol.com — kindly submitted these stupendous samples:

“640K ought to be enough for anybody.”

— Bill Gates, 1981



“Computers in the future may weigh no more than 1.5 tons.”

— **Popular Mechanics**, forecasting the relentless march of science, 1949

“I think there is a world market for maybe five computers.”

— Thomas Watson, chairman of IBM, 1943

“I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won’t last out the year.”

— The editor in charge of business books for Prentice Hall, 1957

“But what ... is it good for?”

— Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip.

“There is no reason anyone would want a computer in their home.”

— Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977

“This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.”

— Western Union internal memo, 1876.



“The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?”

— David Sarnoff’s associates in response to his urgings for investment in the radio in the 1920s.

“The concept is interesting and well-formed, but in order to earn better than a ‘C,’ the idea must be feasible.”

— A Yale University management professor in response to Fred Smith’s paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)

“Who the hell wants to hear actors talk?”

— H.M. Warner, Warner Brothers, 1927

“I’m just glad it’ll be Clark Gable who’s falling on his face and not Gary Cooper.”

— Gary Cooper on his decision not to take the leading role in “Gone With The Wind.”

“A cookie store is a bad idea. Besides, the market

research reports say America likes crispy cookies, not soft and chewy cookies like you make."

— Response to Debbi Fields' idea of starting Mrs. Fields' Cookies.

"We don't like their sound, and guitar music is on the way out."

— Decca Recording Co. rejecting the Beatles, 1962.

"Heavier-than-air flying machines are impossible."

— Lord Kelvin, president, Royal Society, 1895.



"If I had thought about it, I wouldn't have done the experiment. The literature was full of examples that said you can't do this."

— Spencer Silver on the work that led to the unique adhesives for 3-M "Post-It" Notepads.

"So we went to Atari and said, 'Hey, we've got this amazing thing, even built with some of your parts, and what do you think about funding us? Or we'll give it to you. We just want to do it. Pay our salary, we'll come work for you.' And they said, 'No.' So then we went to Hewlett-Packard, and they said, 'Hey, we don't need you. You haven't got through college yet.'"

— Apple Computer Inc. founder Steve Jobs on attempts to get Atari and H-P interested in his and Steve Wozniak's personal computer.

"Professor Goddard does not know the relation between action and reaction and the need to have something better than a vacuum against which to react. He seems to lack the basic knowledge ladled out daily in high schools."

— 1921 *New York Times* editorial about Robert Goddard's revolutionary rocket work.

"You want to have consistent and uniform muscle development across all of your muscles? It can't be done. It's just a fact of life. You just have to accept inconsistent muscle development as an unalterable condition of weight training."

— Response to Arthur Jones, who solved the "unsolvable" problem by inventing Nautilus.

"Drill for oil? You mean drill into the ground to try and find oil? You're crazy."

— Drillers who Edwin L. Drake tried to enlist to his project to drill for oil in 1859.

"Stocks have reached what looks like a permanently high plateau."

—Irving Fisher, Professor of Economics, Yale University, 1929.

"Airplanes are interesting toys but of no military value."

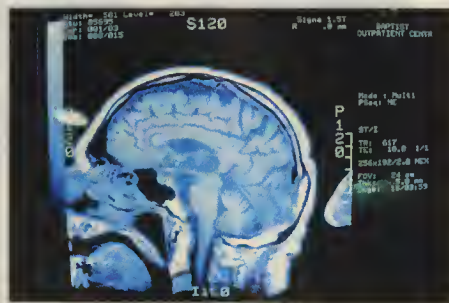
—Marechal Ferdinand Foch, Professor of Strategy, Ecole Superieure de Guerre.

"Everything that can be invented has been invented."

— Charles H. Duell, Commissioner, U.S. Office of Patents, 1899.

"Louis Pasteur's theory of germs is ridiculous fiction."

— Pierre Pachet, Professor of Physiology at Toulouse, 1872



"The abdomen, the chest, and the brain will forever be shut from the intrusion of the wise and humane surgeon."

— Sir John Eric Ericksen, British surgeon, appointed Surgeon-Extraordinary to Queen Victoria 1873. ♦

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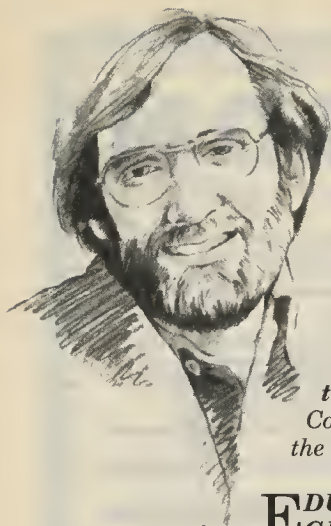
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EDUCATOR LINK

by Rea Andrew Redd

EDUCATOR'S WORLD WIDE WEB TOURGUIDE

Correction: the phone number for theLINQ software distributor Quality Computers was wrong in our November issue; the correct phone number is (800)777-3642.

EDUCATOR'S WORLD WIDE WEB TOURGUIDE: A Graphical Tour Of Over 200

Educational Treasures On The World Wide Web, By The Staff Of Classroom Connect (Gregory Giagnocavo, Tim McLain, Vince DiStefano, Chris Noonan Sturm, and Eileen Mauskapf), ISBN 0-932577-16-4; Wentworth Worldwide Media, Inc., Lancaster, PA, 1995, 191 pp., index, appendices, glossary, site list and CD ROM, \$39.95.

There is no mistaking the fact the Wentworth Worldwide Media publishes sharp-looking and useful products when you browse through this book. Divided into eleven chapters by subject matter, this tourguide is extremely easy to use. Each page in each chapter has one World Wide Web (WWW) site, which includes a description, its use for educators, the URL address, a graphic image of a web page, one or two lesson integration ideas for teachers, and a listing of three additional sites that relate to the topic.

The basic stats on the disciplines and their Web sites are: **Art** (16 sites), **Business** (13), **English/Literature** (13), **Foreign Languages** (12), **Geography** (10), **Health/Physical Education** (14), **History** (13), **Mathematics** (11), **Science** (14), **Social Sciences/Humanities** (16), **Vocational Education** (6).

Now, your first question may be "At 40 bucks do I need math or business Web sites when I teach geography?" And there are two ways to answer it. The first one is yes, you do need it. In geography, for example, there are ten Web sites presented and each site has three other sites related to the topic. So, you're getting 30 geography sites. Now, use also the Foreign Language section with twelve Web sites and 36 other sites of related interest. Then examine the

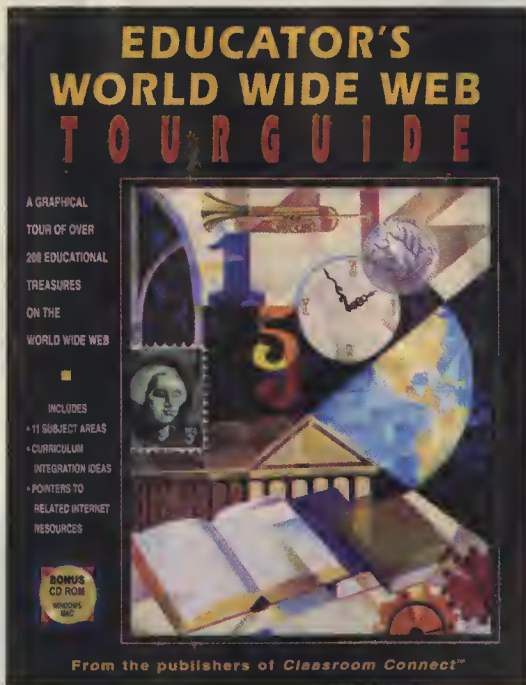
Science section with its 14 Web sites, four of which relate to geography, each with three other sites related to the topic, that's another 12 Web sites for you. You now have 78 Web sites with lesson integration ideas for 26 of them. So, that's about fifty cents a site — not too expensive now, is it?

The second way to answer the \$40 question is: "Have your library buy it and then have the librarian copy your section, 10 to 15 pages." Now it's cheaper than a dirt sandwich. If you took my advice last year, you bought Wentworth Worldwide Media's **Complete Internet Companion**. This year if you can afford just one book in the \$40 price range, make it this one. Oh, by the way, with competition among the superstores, many bookstores offer an educator's discount of 20%. Take your paycheck stub to the manager of your local Borders Bookstore (or Crown, or Barnes & Noble, et al., superstore) and ask for their best deal for teachers.

Other reasons to enjoy **Educator's WWW Tourguide** are that it has a classroom-friendly (no jargon) glossary of over 50 words pertinent to classroom lessons on the Internet, and it has an appendix of twenty often asked questions with answers any junior high student or school board

member could understand. What is the World Wide Web? How does the Web work? The Web and the Internet — aren't they the same thing? What's URL mean in a Web address? How can I integrate the Web in my classroom?

The CD ROM that comes with the Tourguide contains all the Web sites featured in the book along with Web browser software that allows users to select the indicated hotlinks contained on each Web page and to browse them just as if they were connected to the Internet. Users with a computer modem and an Internet connection can use the CD ROM's built-in Web browser to actively link to the book's Web sites on the Internet.



Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: redd@genesis.edu

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HOLD THAT (ELECTRONIC) SNAKE: UPDATE ON THE NATIONAL BIOLOGY TEACHERS NETWORK



As reported in Education Link last year, Genentech, Inc. promised to drop a cool \$10 million to provide a nationwide interactive computer network for high school biology teachers. That network, now called **Access Excellence**, offers data and communications to any with a computer and modem. Genentech used the Roper Organization to survey more than 500 science teachers and discovered that over ninety percent felt isolated from other professionals in their field and that restricted school budgets and heavy work loads have prevented them from keeping up with scientific advances.

Genentech gave out 100 fellowships for the past two summers to science teachers. Bringing them to company headquarters in San Francisco, Genentech introduced the teachers to scientists and software programmers. Modem-equipped laptop computers and unlimited time on America Online (AOL) were given to the teachers to test the hypothesis that inspiring teachers will lead teachers to inspire students.

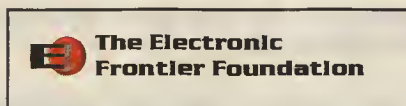
Access Excellence gets over 10,000 hits a month through America Online and over 100,000 through the World Wide Web. AOL members should look in the Teachers Information Network (**keyword: Excellence**) and Web users should look at <http://www.gene.com/ae> for the Access Excellence network.

Lesson activities and teaching strategies for the classroom, message boards for posting Q&As, science news and history, online conferences between teachers and

scientists, national organization exhibits and publications, book and journal article reviews, and career information in biotechnology are all there.

Voice call (800)295-9881 for copies of Access Excellence materials and hard copies of the online resources.

INTERNET SAFETY



Keeping in mind Carnegie Mellon University's dilemma with its computer network, pornography and librarianship as discussed in last month's Education Link, you may want to drop by the Electronic Frontier Foundation. The Communications Decency Amendment (CDA) to the omnibus telecommunications bill passed last summer is still being hotly debated on the BBS. The CDA allows for maximum fines up to \$100,000 or two years in jail for those who make, solicit, or initiate the transmission via modem of obscene material to minors. Also, additional information on state and national legislation on telecommunications and the Internet, is available at the Electronic Frontier's addresses, <http://www EFF.org> and <mailto:ask@EFF.org>.

DISTANCE LEARNING FOR THE TARHEEL STATE

Appalachian State University, located in western North Carolina, has set up a partnership with Southern Bell, AT&T, Compression Labs, Inc., and the regions public schools to link rural schools through the existing public telephone network. Through the Integrated Services Digital Network (ISDN) technology, the partnership uses the existing copper wire telephone lines, interactive video with voice and data capabilities. Without fiber optics, microwave or satellite technology, the Impact North Carolina partnership's goals are to promote student self-instruction, continuing education for teachers, and feedback for student teachers in the field.

The initial startup is in Watauga County and six other counties will be brought into the partnership in the next two years. Public school students and faculty will have access to the

Appalachian State education department's faculty, students majoring in education, and the university's communication network resources.

Send fat mail to Dr. James Strom, Vice-chancellor for University Advancement, Appalachian State University, Boone, NC 28608 or voice call (704)262-2090.

THE K-12 BROWSER

"Gee Ma, when I grow up I wanna be a Republican!" Or you might hear, "I know I shoulda started it sooner, but the government report is due tomorrow." If either statement comes your way then tell them to visit <http://www.gopac.com> which trains and educates Republican candidates on the GOP's party line. GOPAC has set up an online classroom with training seminars and details/schedules for local, state and national events. Debt limits, foreign policy, Medicare/Medicaid issues, as well as, BBS, chat rooms and current speeches are available at this site.



Check <http://web66.coled.umn.edu> for a listing over 1,500 K-12 sites worldwide. The University of Minnesota, Minneapolis sponsors this BBS. Web66 also presents material on site creation by classrooms using a Macintosh and Netscape, Mosaic or similar software. Student projects, school newspapers, district calendars, field trip reports are among the diverse materials on Web66. California, Virginia and Washington are the states with the leading number of K-12 Web sites.



When you are startled by a child's unfamiliarity with the **Star Wars** trilogy (yes, way back to the 1970's before even today's high school students were born) then visit <http://www.tcfhe.com> for 20th Century Fox Home Entertainment, Inc.'s presentation of film clips, scripts,

props and special effects, and an interview with George Lucas. While presenting material on the Scientific Revolution of the 1600's to a class of sophomores, we discussed scientific and non-scientific/alternative views of knowing. We ended up talking about the role of "The Force" as a non-scientific way of knowing the natural world.

On the other hand, if you have girls in your classroom who comb their hair and put on lipstick as you are making some profound statements illustrated on the chalkboard, then as educational punishment have them find <http://www.missamerica.com> and then have them make an oral report on what they found. And for those guys who can't hear you because they fell asleep last night with their head in an audio speaker, you should have them investigate <http://www.pbs.org> and locate Public Broadcasting System's pages on the History of Rock & Roll television series that aired in the autumn and will probably show up again during spring fundraisers. A favorable feature at this site is the links offered to other Web sites, local television station sites, and sites devoted to Masterpiece Theater, Nature, and Science.



Read a magazine feature story from *Popular Mechanics*, *Country Living*, *Good Housekeeping* and *Redbook* by visiting <http://home.arts.com> for Hearst News Media publications. To preview a new publication before you pick it up at the newsstand, visit <http://www.georgemag.com> to find *George*, John F. Kennedy Jr.'s people and politics rag. Also, *Electronic Learning*, published by Scholastic, Inc. is now available on the WWW; <http://www.scholastic.com/public/EL/EL.html> is the site for an abbreviated version of the hard copy. This electronic version is updated every two weeks. Also, if you are an America Online subscriber, you may try Scholastic, Inc.'s Technology Kitchen on the Scholastic Network; voice call (800)246-2986 to join the Scholastic Network.

If you have a son or daughter that has to do a health report, set them down at the computer and let them visit <http://www.amhrt.org> for the American Health Association's BBS. Blood pressure and physical activity,

cholesterol and diet, heart disease and strokes, are just a few of the topics that are easily accessible.

For very colorful presentations on exercise and injury, running and games, foot health and shoe design, try <http://www.newbalance.com> for a very soft sell from the New Balance shoe company. You don't get any prices on this BBS but you can check a list of New Balance dealers in your region.

MEMO FROM THE DEEP POCKETS DEPARTMENT

Over 600 schools received equipment and training worth \$100 to over \$5,000 by the Globe School Program. This program amasses environmental information from classrooms that deliver it over the Internet to Globe, which then makes it available on the World Wide Web. Computers, modems, scientific measuring equipment, teacher training are available to those teachers who can demonstrate how Globe data is used in science and math classrooms. Write Globe Program, 744 Jackson Place NW, Washington, D.C. 20503

SITES AND RESOURCES

Check these sites for resources on American politics and information issues:

<http://epic.org> — the Electronic Privacy Information Center for material on medical, credit, cryptography issues and the National Information Infrastructure policy of the national government.

<http://www.fedworld.gov> — Fedworld (sponsored by the National Technical Information Service) for a one-stop to find and order current U.S. government reports for over 125 federal bulletin boards and databases.

<http://thomas.loc.gov> — Thomas

for searchable databases of all House and Senate bills since 1993 including chronologies and abstracts of pending bills, the daily issue of the Congressional Record, e-mail directories, transcripts of previous CSPAN broadcasts and its current schedule.

<http://cyberwerks.com:70/1/cyberwire> — Cyberwire Dispatch for Brock Meeks' musings from Washington, DC and *Inter@ctive Magazine*.

<http://www.cdt.org> — Center for Democracy and Technology for advocacy of liberty and democracy on telecommunications. ♦

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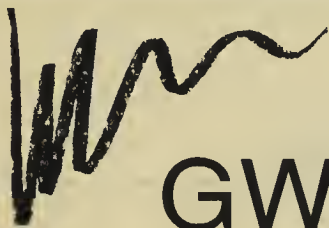
MMB TEAMate

Business Software for Online Services, Web & BBS

<http://www.mmb.com>

info@mmb.com (310) 318 5302

mmb development corporation voice (310) 318 1322



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508-429-6227 Voice

Classified Ads

Make extra income by selling classified ads on-line with The Classified Manager. TCM will handle an unlimited number of classified ads in an unlimited number of categories. Very configurable, it allows for different rates or even free ads on a category by category basis. — \$129.95

TSTAT

Tstat v2.7 reads the TBBS dayfile.lst activity log and creates reports of system activity.. Tstat reports day/time all lines are busy, calls by bps total and by line, option module and menu loads, files up/downloads, bad passwords. Number of new users, file transfers/aborts by protocol, and much more. Up to 6 custom searches for any occurrence in the dayfile. — \$89.95

SalesMaster ©

The most complete online sales program ever created! You can add sixteen online sales representatives, working 24 hours a day to enhance your sales efforts, for less than the cost of one employee. This easy to install and easy to use software includes inventory control, accounting security, and now full point-of-sale capability so you can use the same software for processing internal sales. If you need a solid and secure sales software or you have a need for a complete sales platform, we can fill those needs with SalesMaster. Whatever you have to sell, SalesMaster can help you with it's built-in marketing capabilities. Call for more information on the only sales package you'll ever need for both inside and outside sales. — \$399.95

Easy Menu Creation for All.

ProMenu, the most popular program for creating menus for TBBS platforms is now generic. Regardless of the BBS or network you are using, if it displays files as menus, **ProMenu** is the program designed to make it easy to create and maintain menus in multiple formats. You create the menu and save it in ASCII, ANSI, ASCII/IBM, RIP, NAPLPS, BASIC and xBase formats simultaneously.

Full Communications Services.

We have been installing and maintaining commercial communications systems for almost ten years and we can easily address all your requirements, from a basic needs analysis that will tell you just what your needs and costs will be to a complete Internet ready system. We can help you learn to maintain your system, we can do any necessary maintenance remotely or we can establish a BBS for you at one of our sites.

TSX-BBS, The "Swiss Army Knife" Platform

For less than you might expect you can install a BBS with full multi-tasking and multi-user capabilities. With TSX-BBS you can run a multi-line BBS with full Internet connectivity, a WebServer, a CD-ROM server, a "door" server and more on a single CPU. And you can allow your users access to programs like FoxPro and Clipper applications on the very same platform. With TSX-BBS you add more CPU power because you need to expand, not because it's required to get started.

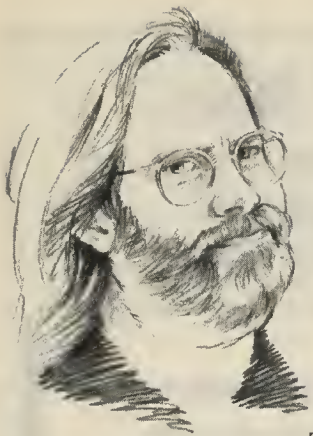
Telnet to gwabbs.com or view our WebServer at <http://www.gwabbs.com>

• Pete White (Boston) 508-429-6227

• Toby Schneider (Chicago) 708-298-6919 • John Schachat (San Jose) 408-267-7176

GW Associates offers over 200 third party programs from more than 30 developers and is the oldest and largest supplier of add-on programs for TBBS. Download the latest listing from the BBS. Most programs can be viewed on-line and many have demos you can download and try on your system.

508-429-6227 voice or 508-429-8385 bbs



BEGINNER'S LUCK

by Doug Shaker

Picking Software for Mothra II

Three months ago, I had a working BBS, nicknamed Mothra, with Internet access, a web server, a mail server, netnews, and a host of other goodies.

Two months ago my hard disks died a horrible death, taking most of my files with them. A month ago, my BBS software got into a fight with my hardware and, between the two of them, they destroyed everything on the disk and forced me to abandon my old BBS software.

I thought seriously about abandoning the whole BBS thing. I started out with dreams of glory — thousands of people logging in, intelligent chat groups about great topics, hot technology serving a brilliant and charming user base. I ended up with an ailing PC and a user base that, most of the time, wouldn't talk to me, let alone talk to each other. I thought about returning to a life where spare time meant doing something more pleasurable than downloading files for my BBS. But, then, while the BBS was down, I got an e-mail message from someone who told me that he and several of his buddies had gotten jobs because of the forum on my BBS that archived Smalltalk job openings. That was the push I needed. Could I leave my compatriots in the lurch? No way! Or at least not yet.

I am now running Linux as my operating system. Linux is a UNIX clone and it is, for the most part, free. You can FTP it from dozens of sites or you can buy CD-ROMs with it and hundreds of Linux-based utilities on them. I bought a CDROM.

I love Linux, and hate DOS, but let me give you a caveat here. Linux is a very good clone of UNIX and UNIX-clones are great for Internet-related work. But Linux (and UNIX and all UNIX clones) is not very easy to work with. If you want to run Linux, you will have to put in some serious study to learn how it works. You will be rewarded with a stable, multitasking operating system that can do lots of stuff. But don't expect to be able to set up a web server in 10 minutes. If you use a UNIX clone, you need to understand Internet technology before you can use it. There's no point-and-click interface that will set stuff up for you. It's not for everyone.

But I've been a UNIX system administrator before and I love Linux. My Linux box has been up for almost three weeks without a crash or a single prob-

lem. I can FTP stuff from distant lands, get my mail, run Netscape, and read netnews without a single problem. But so far, I have just used it for personal stuff — I don't have a BBS working yet.

Now I have to pick my BBS software all over. Being a proper nerd, I need to do lists and check boxes and write stuff on graph paper before I can make a decision. I always start tasks like this with a list or, actually, two lists. The first is a list of what I need and the second is a list of candidates. I make up the first list myself. I try to crib the second list from someone else, usually by looking around on the Internet.

The "I need" list is a little different from the last time I did this. First and foremost, the BBS needs to run under Linux and it needs to be cheap — I've blown all my BBS money already. Second, I still need Internet connectivity — over half my users were logging in over the Internet.

"Being a proper nerd, I need to do lists and check boxes and write stuff on graph paper before I can make a decision."

After that, there are a whole lot of "I want" kind of things. I want to get netnews feeding into forums. Then, besides netnews, there are a lot of interesting mailing lists in the world. I'd like to be able to somehow get those mailing lists into a forum on the BBS. The easiest way that I know of to do that is to sign on to the mailing list under an alias and then have the e-

mail for that alias translated into messages on a forum. Besides forums, I would also like to be able to integrate an FTP library with the BBS' file library. The final thing on my "I want" list is web access to the BBS. The web really has taken over the Internet.

Now I needed a list of candidates, preferably one that someone else has put together. I did a little web searching and found the FAQ (frequently-asked questions list) for the newsgroup `alt.bbs.unixbbs`. It is supposed to be posted to that newsgroup twice a month, but I couldn't find it there. It is also supposed to be available for FTP from `rtfm.mit.edu` as `/pub/usenet-by-group/alt.bbs.unixbbs`, but I couldn't find it there, either. It was available on the web as `http://www.dsnet.com/unixbbs.faq`.

The FAQ lists several packages that might be appropriate. There is one pretty expensive package, **TEAMate** from MMB Development. There are two medium cost systems listed, **Caucus** from Camber-Roth and **Worldgroup** for UNIX from Galacticomm.

Doug Shaker runs a one-person mail-order business supplying Smalltalk software to Smalltalk developers. He started his BBS in early 1995 as an adjunct to his business. He wishes he knew what he was doing, but he sees no chance of that happening anytime soon. You can send Doug e-mail at `doug@smalltalk.com` or you can connect to his BBS at (415)854-5581. You may also telnet to his BBS at `bbs.smalltalk.com`. Doug has five modems, four computers, three phones, two children and one wife. They keep him busy.

And there is a host of low cost or free systems, but most of them don't even come close to answering my needs. My favorites of the low cost ones are *Uniboard* and *Waffle*.

TEAMate is a pretty expensive system. It is a client-server system with the clients licensed separately from the server. It has a nifty scheme to let you integrate your web server and your BBS. But it is pricey — a minimal configuration will set you back **\$5000** and a more complete configuration might be **\$15,000** or more. It looks pretty good, but if I had that kind of money, I'd prefer to buy a sports car.

Caucus gets a good review in the FAQ, but the information in the FAQ was supplied by Camber-Roth, the people who sell it, so you would expect it to be pretty positive. They don't list an e-mail address, a telnet address, or a web site in the description. I did a web search for Camber-Roth and came up dry. Perhaps the supplier is not very committed to doing business on the net? I don't know what the BBS' Internet capabilities are, but it looks bad. I couldn't afford them anyway.

The Galacticomm Worldgroup stuff is a little more expensive than I would like — **\$1695** for an 8 user system — but it is a client-server BBS and it includes a web server. If you don't know what I mean by a client-server BBS, it is a BBS where the user can download an interface program that should make it easier to use the BBS software. I suppose I am utterly retro in the age of the web, but I like the idea of having a client-server BBS. I am, however, a little apprehensive about the interface software. If it is a large file, will the users download it? If the users hook up over telnet instead of a phone line, will the interface software still work? If the users contact the BBS over the web, can the web server be used to access the BBS? I don't know the answer to any of these questions, but I want to find out.

Uniboard is one of my favorite UNIX BBSs. It isn't free, but it is pretty close. The cost is **\$140** for an 8-user license. That's my kind of licensing fee! If you can't afford a license fee like that, then Heaven help you when it comes time to buy modems. Uniboard has support for Linux, news, Internet e-mail, and a bunch of other things. Telnet://wariat.org or call (216)481-1960 for a demo. The only thing I don't like about it is the way the

user starts it up. The user logs into the system as a special UNIX user (user: bbs, no password) and then the system has to load the BBS into memory. This doesn't take long — about five or ten seconds — but there ought to be a way around it.

Waffle, the other cheap UNIX BBS that I like, started out as a way of giving netnews access to DOS users and it is still primarily a DOS BBS. There is a port to UNIX, but, as far as I can tell, Waffle is designed for systems with no access to the outside world except through a modem-based UUCP link — it doesn't seem to know about the Internet. Waffle is cheap, **\$120** for a UNIX license, but, as far as I can tell, it fails all of my Internet connectivity requirements. I'm sure someone will tell me I am wrong, but for now, I won't be looking at it any further.

With Caucus, Waffle and TEAMate out, that leaves me with Uniboard and Worldgroup as possibilities. Uniboard is simpler, much cheaper and, if I wasn't writing this column, would probably be my choice. However, Worldgroup looks exciting and, since I am writing this column, I am able to phone them up and say "Hi! I'm a slimy journalist and I would like to get a free copy of your software so that I can review it for *Boardwatch Magazine*." It's one of the perks! I called them about two weeks ago and they sent me a beta copy of Worldgroup for UNIX. Yahoo! Next month, this slimy journalist will try to get Worldgroup installed on his Linux box.

RESOURCES:

Linux is a very good UNIX clone for 386 (or better) PCs. I bought my copy from Yggdrasil Computing in San Jose, California. Their Linux CDROM set costs about **\$40**. Call them at (408)261-6630 or mailto:info@yggdrasil.com. Get *The Linux Bible* at the same time. It is a nicely printed series of help files for Linux that you could download and print yourself. But it's only **\$40** — why bother?

Linux and the help files are also available at no cost from a number of FTP sites, including ftp://ftp.sunsite.unc.edu. If you want to go this route, the first file you should download is the *Linux Installation and Getting Started* manual. It is at ftp://sunsite.unc.edu/pub/Linux/docs/LDP/install-guide. It is a

pretty good introduction to the whole Linux scene. It starts by telling you what to download next and how to make use of it. Free software is hardly ever this good.

I like Linux because I like UNIX. If you have UNIX experience, Linux is like a breath of fresh air. It is free, it works, and it connects to the Internet in an absolutely reliable way. But if you don't have UNIX experience, it is a miserably complex OS that will take you a long time to learn. For example, the installation instructions are likely to assume that you know what the system file */etc/fstab* is for and the format in which its entries are recorded. If you don't know what that file is for, you had better be prepared to learn. If you would like to learn UNIX well enough to use Linux, you will need to learn the craft of UNIX system administration. The books I use to help me with this are *The Linux Bible* (mentioned above), *UNIX System Administration Handbook* by Nemeth, Snyder, Seebass & Hein (Prentice-Hall, ISBN 0-13-151051-7, **\$52**) and *Essential System Administration* by AEleen Frisch (O'Reilly & Associates, ISBN 1-56592-127-5, **\$32.95**). The latter two are available from Computer Literacy Bookshops, (408)435-0744 or maito:info@clbooks.com.

Here's the contact information for the BBS software I looked at. *TEAMate* is sold by MMB Development: (310)318-1322 voice; mailto:bob@mm.com or telnet://teamate.mmb.com. *Caucus* is available from Camber-Roth, (313)482-8710, no e-mail address or web site. *Worldgroup for UNIX* is available from Galacticomm, (800)328-1128; mailto:unix@gcomm.com or http://www.gcomm.com.

By the way, I have found a couple of good books on setting up web servers and web pages. The web page book is *HTML Sourcebook* by Ian S. Graham (John Wiley & Sons, Inc., ISBN 0-471-11849-4, **\$29.95**). The books on running a web site are *How to Set Up and Maintain a World Wide Web Site: The Guide for Information Providers* by Lincoln Stein (Addison-Wesley, ISBN 0-201-63389-2, **\$29.95**) and *Serving the Web* by Robert Jon Mudry (Coriolis Group Books, ISBN 1-883577-30-6, **\$39.99**). ♦

List of BBS List Keepers

This listing comprises a list of those who compile and maintain lists of bulletin boards, either by topical category, or by some geographic area or definition - often by area code. The primary bulletin board system where the list can be downloaded electronically is also included.

BBSLIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
New Jersey BBS's	Scott Drake	T.E.R.N. BBS	(201)399-4772
Connecticut AC 203	Kevin Brook	Creative Edge BBS	(203)743-4044
BBS With Handicapped Focus	Bill McGarry	Handicap News BBS	(203)926-6168
Manitoba Canada AC 204	Victor Laking	Generic BBS	(204)475-5199
West Washington AC 206	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Tacoma Washington AC 206	Richard Langsford	AmoCat BBS	(206)566-1155
Puget Sound Area AC 206	Art Tomlin	Orion Station	(206)675-0565
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
Modesto CA AC 209	Dennis	The Connection BBS	(209)549-7980
Tracy CA AC 209	James Arnold	The Sinking Ship	(209)833-3615
Stockton AC 209	Monty A Gonzales	The Wrong Number BBS	(209)943-1880
San Antonio TX AC 210	Donna Murrell	Main Complex BBS	(210)658-8009
Graphical User Interface BBS	David Shapiro	The Gooney (GUI) BBS	(212)876-5885
96 List - 9600+bps BBS	Ken Sukimoto	Downtown BBS	(213)484-0260
Employment BBSs	George Smith	Executive Connection	(214)306-3393
Dallas/Ft.Worth BBS List	Mark Elson/Mike Shockley	Blues Cafe	(214)638-1181
Open Access UNIX Site List	Phil Eschallier	LGPN1 (login:BBS)	(215)348-9727
Cleveland Area 216	Jim Barry	Flip Flop	(216)951-9134
Educational and Indiana BBS	Joe McIntosh	KSI Public BBS	(219)626-2150
Conservation/Nature BBS List	D.Wendling/JS Christianso	Coin of the Realm	(301)585-6697
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Desktop Publishing BBS	Frank Atlee	Infinite Perspective	(301)924-0398
Delaware AC 302	Vince Boehm/Dave Osburn	Talk Radio BBS	(302)429-7667
Colorado AC 303/719	Willis Morrow	Big Boy's BBS	(303)458-3832
Cave Exploration BBSs	Douglas L. Moore II	The CatEye BBS	(304)592-3390
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(305)474-6512
Southern California	Mike Hefferman	SOCAL Corner	(310)422-7942
California AC 310	Jim Walton	Illusions BBS	(310)804-3324
Detroit AC 313	Tom McEachern	Wonderland BBS	(313)274-3531
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
St. Louis AC 314	Beth Brooks	Fire Escape's Dir	(314)741-9505
ASP BBS Member List	Richard Holler	The RoadHouse BBS	(317)784-2147
Engineering Related BBS	Arthur Petrzalka	Computer Plumber	(319)337-6723
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Alberta AC 403	Stephen Decarie	T-8000	(403)246-4487
Calgary Alberta AC 403	Jeremy Birkett	The Quantum BBS	(403)252-5119
Atlanta Area 404	Online Atlanta Society	OASIS	(404)627-2662
Oklahoma City AC 405	John Burton	The SandBox	(405)737-9540
Montana Area	Jay Michalik	Valley Light BBS	(406)273-6399
Searchlight BBS Systems	Chad Payne	Montana MediaNet	(406)549-6325
Orlando BBS List AC 407	Lenny Lacuy	Infinite Space Onlin	(407)856-0021
San Francisco Bay Area	Mark Shapiro	BABBA BBS	(408)946-8592
Baltimore BBS Area 410	David Fogle	Silver Streak BBS	(410)254-3400
Pittsburgh AC 412	Chas Stokes	Zuul's Catacombs	(412)264-9787
Milwaukee AC 414	Mark G.	The Castle	(414)327-5085
North America Nudist List	Patrick O'Brien	Natural Connection	(414)426-2110
Toledo Ohio Area 419/313	Ryck Zarick	Toledo's TBBS	(419)475-2241
Arkansas Area 501	Bob Underdown	The Blue & The Grey	(501)444-8420
Louisville KY South IN	Tim Arnold	Dance of Shiva BBS	(502)893-6360
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145
New Mexico AC 505	Dan Kiehl	MDC Computers BBS	(505)434-0258

BBSLIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Apogee/ID/Software Crtns List	Dan Linton	Software Creations	(508)368-7139
PCBoards on Internet	Ruben Melo	ponyXpress BBS	(508)587-7669
Worcester MA AC 508	Charles Grosvenor	Information Society	(508)832-7542
Corpus Christi	James Cordani	Treasure Island	(512)241-8358
Austin Area AC 512	John Foster	Camel's Back BBS	(512)243-0077
Selected BBS	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
Free Shareware AC 516	Harold Stein	Long Island Exchange	(516)271-5303
516 AC, 800 numbers, Freenets	Wilton Virgo	Long Island BBS	(516)338-8595
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM	Wolverine BBS	(517)695-9952
518 AC	Dave Hitt	Electric Avenue	(518)899-3292
Phoenix AC 602	Sue Widemark	Cheese Whiz BBS	(602)279-0793
Cochise County Arizona	Kevin McCrory	The Commo Shack BBS	(602)452-0587
Arizona and Southwest U.S.	Michael	BBSouthWest	(602)820-7861
New Hampshire	Mike Maggi	Marios Birdhouse	(603)226-0467
Victoria/Vancouver AC 604	Mark Morley	Island Net	(604)477-5163
Kentucky AC 606	Jon Hagee	Kentucky Explorer	(606)271-1451
Wisconsin 608	Jim Wargula	JW-PC Dataflex.HST	(608)837-1923
New Jersey AC 609	Dave Schubert	The Casino BBS	(609)485-2380
Real Estate Boards	Ted Kraiss	Dealmakers Online	(609)587-4651
New Jersey Area 201/609/908	Wayne R. Morton	Praedo BBS	(609)953-0769
Medical Issues BBS	Edward Del Grosso	Black Bag	(610)454-7396
Job Search and Inet hot list	Ward Christman	Online Opportunities	(610)873-7170
Minnesota Twin Cities AC 612	Barry Watson	Abiogenetic BBS	(612)774-8454
Apple II BBS	Mike Shecket	Way Out	(614)436-4846
Business/Professional BBS	Dennis Hauser	Delight The Customer	(616)662-0393
Female Sysops	Brenda Donovan	The Pacific Rim	(619)278-7361
San Diego, CA AC 619	Tom Grigg	ComputerEdge	(619)573-1675
San Diego AC 619	Joe Nicholson	General Alarm	(619)669-0385
Apple II BBS with Internet con	Morgan Davis	pro-sol	(619)670-5379
Virginia AC 703/804	Eddie Gebhard	PC Power House	(703)348-1423
OS/2 BBS Systems	Pete Norloff	OS2/Shareware BBS	(703)385-4325
Genealogy Related BBS	Richard A. Pence	NGS-CIG	(703)528-2612
Charlotte, NC AC 704	Blaine Schmidt	Moobasi Optics, Inc	(704)522-1018
Black Run/Oriented BBS	Arthur "Rambo" McGee	BDPA BAC BBS	(707)552-3314
Chicago	Peter Anvin	Royal Swedish Viking	(708)491-9036
Gay & Lesbian BBS List	Billy Kennedy	Risquilly BBS	(708)495-6609
Airline Pilot/JUMPSEAT BBSs	Rex Chadwell	ChicAgo Hangar	(708)980-1613
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
Korean BBS	Wayne Jeong	Korea America Online	(714)449-9373
Rochester NY AC 716	Tracy Logan	Logan's Run	(716)328-2914
RIP BBS Listing	Mario Mueller	Antarctica BBS	(717)755-2440
717 AC BBS Listing	Adam Viener	Cyberia	(717)840-1444
NYC AC 718 & 212	Michael Muller	Tree Branch Online	(718)739-5845
Vermont BBS's	Russ Boyce	Computer Ser. of Ver	(802)334-7976
Ecology/Conservation BBS	Bob Chapman	EarthArt BBS	(803)552-4389
Central California AC 805	Larry Honore	His Board	(805)652-1478
Wildcat! BBS	Jim Harrer	Wildcat! HQ	(805)873-2400
Oahu Hawaii	Brent Davis	Land's End BBS	(808)499-2527
Detroit AC 810	Donald Quarles	Bad To The Bone	(810)749-3581
Technical Support BBS List	Gary Barr	Digicom BBS	(812)479-1310
Pinellas/Tampa Florida AC 813	Emery Mandel	Mercury Opus	(813)321-0734
Kansas City Area 816/913	Bob Zumbrunnen	PC-HELP BBS	(816)331-4703
Dallas Fort Worth	Mark Robbins	Second Sanctum	(817)467-1175
Denton, TX AC 817	Walter Bowen	Mezzanine BBS	(817)565-9165
Occult BBS	Phil Hansford	Mysteria	(818)353-8891
Commodore 64/128/Amiga BBS	John Rigali	Night Gallery	(818)448-8529
Texarkana BBS List	Rodney Payne	Internet Connection	(903)793-7173
Internet accessible BBS's	Richard S. Mark	Dragon Keep	(904)374-3500
Durham Region-Ontario Canada	Chuck Cirvec	Odyssey Systems	(905)579-9241
Alaska AC 907	Patti Johnson	Alaska Pirate Soc.	(907)248-9364
Travel Related BBSs	Robert Southwick	AK Information Cache	(907)373-3205
Kansas 913 Area Code BBS's	Chuck Baslock	On-Line Connection	(913)587-0241
Sacramento AC 916	Jackie Kuhwarth	24 Street Exchange	(916)448-2483
Darwin National US BBS List	Bob Breedlove	Bob's BBS	(916)929-7511
OS/2 Related BBS	Dave Fisher	LiveNet 1:170/110	(918)481-5715
Tulsa Oklahoma Area BBS List	Linda Hargraves	ACCESS AMERICA	(918)747-2542
Raleigh NC AC 919	Mike Stroud	Micro Message Svc.	(919)779-6674
National ISDN BBS list	Ken Morrison	Digital Velocity BBS	(919)992-3059
Republic of South Africa	Henk Wolsink	Catalyst BBS	27-41-51-3406
Switzerland BBS List	Cesar Keller	The Warehouse BBS	41-1-492-5157

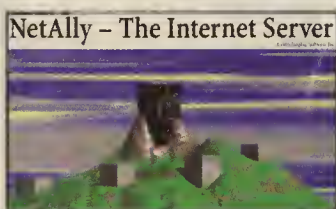


MACINTOSH NEWS

by Bill Gram-Reefer

Servers of the Gods

Last June we reported on Delphic Software's **AL*I Internet Server** (ALI) for Macintosh. Since then the product has been renamed **NetAlly**, an all-in-one Internet Server package for Macintosh. NetAlly provides a modular approach to building a Mac-based Internet host environment, offering servers for DNS, SMTP, FTP, NNTP, POP3, Web and Gopher. A LISTSERV manager is promised. But even though the Gods are sometimes slow to produce the goods they promise, NetAlly should be available by early 1996, so check it out during MacWorld Expo either at the Delphic Booth, the SoftArc pavilion, or maybe find them holed up in one of Apple's ISP stations.



You didn't think WebStar would be the only Web server for Macintosh, did you? Delphic, Intercon and others are working on these feverishly. The

Delphic entry makes some sense in that it is not just another standalone product but something that could work with all the other servers you want to offer. Some of the features of the Delphic web server offered as part of the NetAlly scheme include Smart HTML commands that enable webmasters to create pages that support inline data from CGIs and text files, as well as the ability to take on hide-show commands, if-then statements, and random number generators, allowing for a more dynamic web environment that can change hourly, daily, or based on the incoming user name or IP address, or type of browser. Plus the web server includes built-in mapping capabilities that can cut down the need for references to outside resources or files. With the directory listing feature you can point your web pages at enabled directories so users can browse, download and view files with the HTML interface.

Another neat touch is the ability to do remote editing. Text, HTML, maps, and directory header files all can be viewed and edited remotely using any forms compatible browser. This will come in handy, especially if you provide space for users that maintain their own pages. If they want to build or change their personal page, they can do it online from the convenience of their own browser using their own administration privileges for certain sections of your web site. NetAlly, by the way, prevents users from uploading potentially pernicious CGIs.

By accessing a NetAlly host, users will be able to read their mail using the web browser rather than having to switch to some other program, like Eudora. Same for news and FTP. NetAlly modules will be individually priced from **\$295 to \$495** with all 10 costing somewhere around **\$1,995** (what a year!). Interestingly, the literature I received from Delphic in September, 1995, states that Delphic will be offering the web server completely free of charge, for a very limited time, so give it a quick look. Delphic Software Inc.; 104 East Olive Ave, Suite #100 Redlands, CA 92373; (909) 792-7932 (voice); (909) 798-8382 (fax); mailto:info@delphic.com (Internet e-mail) <http://www.delphic.com> (WWW).

I've never written about **Hermes** BBS Software. But truly fearing the wrath of the fairness gods, here goes. First let me get these two necessarily critical objections out of the way and then I'll feel better.

1) Hermes II version 3.3 is not graphical. Hermes offers only a full-color ANSI and ASCII menu and text support. Users must pick about their keyboard like a blind man in the wrong hotel room until you bump into the right command. I'm so used to point and click that Hermes seems almost Jurassic, exciting as that can be for some.

2) From what I can gather from the literature and flame wars on mac.sys.com, Hermes II version 3.3 does not support TCP/IP connections.

O.K., enough railing against the gods. The good side of Hermes II 3.3 is that the functionality you get for a mere **\$125** may be sufficient for those of you that want to get your feet wet in the BBS world and you don't give a hoot about the Internet. Hermes does support 28.8-Kbps modem connections, X-, Y-, and Z-modem and ASCII and batch modem transfers. CD-ROMs are supported. Hermes will run on any Mac from a Plus to a Power Mac running at least System 6.5. A Hermes BBS will support threaded message conferences, file transfer sections, e-mail, general text libraries and provides for over 150 "external" applications. Although not graphical, Hermes doesn't require any special client software. While offering no direct IP connectivity, Hermes is compatible with Macintosh mailer applications like **MacKennel** for Fidonet and other Internet mail transfers. There are lots of security levels and you can support up to 10 dial-in, network or local connections. The publishers claim that the QuickStart documentation that comes with Hermes will guide a new sysop through the BBS setup chores in less than 30 minutes.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in **MicroTimes**. His amateurish web page can be accessed at <http://worldview-bbs.com>. E-mail Bill at reefer@worldview-bbs.com

Hermes is distributed as "keyware," where the fully operational version can be downloaded from the Olympus BBS and used for 30 days. You can register the software online. \$125 gets you the whole shooting match; there are no extra charges for additional nodes or users. Computer Classifieds; 12819 SE 38th #101 Bellevue, WA 98006; (206) 643-2316 (voice); (206) 643-2870 (fax); (206) 643-2874 (bbs); mailto:lloydwoodall@hermes.ces.wa.com (Internet e-mail).

One of my favorite online services catering to Macintosh users is **Outland**, which we reported on maybe a year ago. Here's an update. Outland serves the online Macintosh gamer with Internet access and offers a flat-rate monthly fee of \$9.95 for all of the online gaming your parents or spouse can live with. Graphical to the hilt, currently playing at Outland are: Spaceward Ho, Delta Tao Software's tongue-in-cheek, multi-player game of galactic conquest; Reversi, Go, BackStab, Backgammon, and Chess. Other multi-player games include Hearts and Galley, a conquest game using ancient galley ships to island hop to empire. The Outlook serves as Clubhouse where users wait for game openings and can chat. Many of the games have built-in chat windows where players can interact during play ("Ha, gotcha!").



New games coming to Outland are Conquest, a multi-player Risk-type game and Assassins, where, in a 2-D overhead maze-type display, players are given "targets" to "kill," sort of in the RoboWars (Maxis) mold where opponents plan out their moves ahead of the action then play the scene out to see who got snuffed and who didn't.

I found my first Outland venture extremely easy to set up and use, and I had no small fun. After logging on I was immediately engaged (consumed, really) in a game of Spaceward Ho and a very quick two hours went by not even thinking, "hey, I'm doing this over the Internet."

Founded in 1994 by Bill Lipa, Dave King, and Alex Beltramo, Outland

evolved from their joint work on creating a multi-player network game of their own. In the process, they saw the potential to create an infrastructure that could support a variety of activities. Since then Outland has given a lot of effort and development time to creating a robust technology that has commanded recognition. Outland offers a development kit that independent software publishers are using to bring new games to the service. Incremental patching lets users update new versions of their software without having to download entire revisions and the Outland TCP Tool has become a widely circulated freeware product.

So where Outland lacks numbers, the foundation has been laid for quite a bit of extensibility without having to redo the entire environment. The Chess module of Outland, for example has served as the "here's how you do it" blueprint or template for other games appearing on the service. On the user side, the graphical interface offers a well-done chess board and pieces. There are clocks, rankings, sounds and the ability to save games for playback. Since the beginning of the year, Outland has added a T1 connection through BARRNet, a regional Internet access provider making for fast and reliable game response. You can reach Outland at <http://www.outland.com> or call (415)328-5659.

Recent developments indicate that Outland's background development work is paying off, as it has gained the attention of Kleiner Perkins Caufield and Byers, funders of TEN, the **Total Entertainment Network**. Coming online soon, TEN will combine Planet Optigon and Outland technology. Outland will continue as a separate entity but you can bet a good bit of their savvy is being employed to help roll out TEN, which will provide both Windows and Macintosh client software. According to TEN's web page, "On TEN, you'll be able to play hit computer games with people all over the world. The network will be so fast, the interface so sharp, and the competition so fierce—well, it just may scare you." To back that claim up, TEN announced its partnership with Apogee Software, makers of **Wolfenstein 3-D** and the **Duke Nukem** series. According to the agreement, Apogee will furnish four games for exclusive use by TEN, plus two more



on a shared-exclusive basis. The titles include **Xenophage**, **Duke Nukem 3-D**, **Terminal Velocity**, **Ruins**, and **Shadow Warrior**, all developed by 3D Realms, a division of Apogee. These in addition to Maxis' SimCity game simulation. TEN's front-end GUI will ship on CD-ROM and will be available first for DOS then other platforms including Windows 95, PowerMac and Macintosh. You can sign-up for TEN by accessing the service's web page at <http://www.ten.net> or call (415)495-0743.

KAWASAKI AND PEROT HUDDLE

With the success of the Independence (Reform) Party getting enough signatures to be placed on the California presidential ballot, Ross Perot has begun seriously casting about for high-caliber figures to possibly head up the 1996 campaign effort. One obvious candidate on Perot's long list is Fog City Software president and Apple Fellow, Guy Kawasaki.

In November's issue of this column we documented Guy's single-handed heroism for hot-wiring the American economy with the sensational success of Fog City's (Claris) **Em@iler**. Since then, historical trends have turned on a dime toward a growing Draft Guy movement. After a stunning showing in November's City-Vote and California's Governor Pete Wilson dropping out of the race in favor of Senator Dole, the stage is set for Guy to mount a strong favorite son campaign.

Able to smell opportunity like a hound dog on the scent of possum, Perot recently invited Kawasaki to a very private one-on-one in Texas. After the meeting, Kawasaki made no comment and rushed off to catch a flight back to San Francisco to help out with debugging the next rev of Em@iler. But Perot was heard to exclaim, "Now look, take Microsoft and Apple. You see, this fellow has been fighting the monolithic power of one-party incumbency in the computer industry for almost a decade. This is what we need to do. Kawasaki would fit into our plans like syrup on grits." ♦

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The IntelliServer is an expandable asynchronous communications server that combines the functionality of a high-performance terminal server with the extended communications capabilities of an Internet access device. It can be connected directly to a TCP/IP Ethernet LAN, and requires no special operating system device drivers. It is actually a compact, self-contained RISC workstation complete with 20MHz MIPS-R3000 compatible CPU, 2-4 MB of RAM, resident multi-tasking operating system, and menu driven interface. The IntelliServer has an impressive list of security and configuration features. Users can be automatically logged onto a specific host, offered a menu of host connections, or given access to the menu and shell. If desired, passwords can be defined for specific users and for administrators. IntelliServer's standard feature list includes full PPP, SLIP, and CSLIP support permitting IP devices to be connected over RS-232 serial ports at up to 200Kbps. This offers an ideal solution for sites that wish to implement cost-effective remote access, Internet access, and LAN-to-LAN connectivity. Each 16 port IntelliServer can be expanded using low cost 8-port and 16-port expansion modules. A single IntelliServer can support 64 physical ports, and up to 32 PPP/SLIP connections. These are ideal to run in conjunction with MajorBBS and Worldgroup by bringing in all users in via TCP/IP. This does not have the load normally associated with polling modems at high speeds.

Please call for pricing, configurations and availability.

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BIG BOARD BRIEFS by Wallace Wang

WINCIM 2.0: DON'T BLINK OR YOU'LL MISS IT

For those of you who absolutely must have the latest version of the CompuServe Information Manager for Windows (WinCIM), act quickly.

CompuServe's usual glacial pace of software development has suddenly produced WinCIM 2.0. But WinCIM 3.0 should be out by the time you read this. At the moment, version 2.0 can be ordered free of charge via the WinCIM forum (GO WINCIM) but things are so confused at CIS that the program upgrade can't be downloaded; you can allegedly get it on disk!

The main advantage of WinCIM 2.0 is that CompuServe's web browser (Spry Mosaic) is now integrated into the WinCIM user interface. It's just a stop-gap measure designed to placate members from defecting to America Online (which at least has more interesting television commercials than CompuServe).

WINCIM 3.0: AN AOL KNOCKOFF?

If you're using Windows 95 and want a true 32-bit program, wait for WinCIM 3.0 to arrive sometime in the first quarter of 1996. WinCIM 3.0 is a completely new program that includes integrated web browsing along with a fancy new user interface that emphasizes splashy graphics and colorful buttons that (surprise) looks suspiciously like America Online.

WinCIM 3.0 is designed to make CompuServe easier to use so even experienced members can find what they're looking for without wasting time digging through multiple windows that never seem to look or work alike. It's even rumored that WinCIM 3.0 will take advantage of the e-mail feature embedded in Windows 95 (called Microsoft Exchange). So if you're using WinCIM 3.0, Windows 95, and a network, you can seamlessly send and receive mail between network users and CompuServe members — just like you can with the Microsoft Network.

CompuServe is obviously panicking at the dual threat of America Online and the Microsoft Network, but at least that translates into better service and lower prices in an effort to compete. Let's just hope that CompuServe's sudden changes aren't too late to keep them from slipping further behind America Online and winding up becoming the CBS of the online market.

AOL TO BE BUNDLED WITH PCS

Every copy of Windows 95 comes with the special communications program needed to connect to the Microsoft Network. If you buy any of Microsoft's pro-

grams newest programs like Word, Excel, or Access, a command on the Help menu can even link you to the Microsoft Network at the click of the mouse.

Such obvious advantages don't cost Microsoft anything, unlike the money that America Online dishes out every month to ram America Online floppy disks in every magazine possible. (When you start seeing America Online floppy disks wrapped inside *Cosmopolitan*, *Playboy*, or *Reader's Digest*, then you'll know that the online market has moved beyond total saturation.)

Rather than sit on their butts and whine like CompuServe, America Online has decided to take the offensive and pre-install America Online software on name brand computers such as Packard Bell, Compaq, Digital Equipment, and Gateway 2000. Just when you thought you had to worry about cleaning viruses off your computer, now you'll have to worry about cleaning America Online software from your hard disk as well.

Of course, this opens up a money-making opportunity for programmers. Rather than write an anti-virus program that detects and removes viruses, write an anti-America Online program that detects and removes America Online software. Given the spread of America Online programs, the market for such a program may be larger than anyone may think.

PRODIGY LOSES THE LOS ANGELES TIMES

The Los Angeles Times has decided to bail out of Prodigy and set up shop on the World Wide Web instead. The online version of the newspaper, known as TimesLink, will allow subscribers to access articles, advertising, and classified ads using their favorite web browser, thus opening up a greater market than Prodigy's limited (and slowly growing) membership.

Of course, this opens up a whole new question concerning all online services. Why should Time Magazine or U.S. News & World Report stick with America Online or CompuServe when they can just set up their own web site and reach the whole world directly instead of paying for access to the much smaller membership of each online service? Perhaps this defection of the Los Angeles Times is just a sign of the future. After all, Apple recently moved their entire eWorld online service onto the World Wide Web so maybe the world of online services is doomed anyway.

HOLLYWOOD: A FOOL'S PARADISE

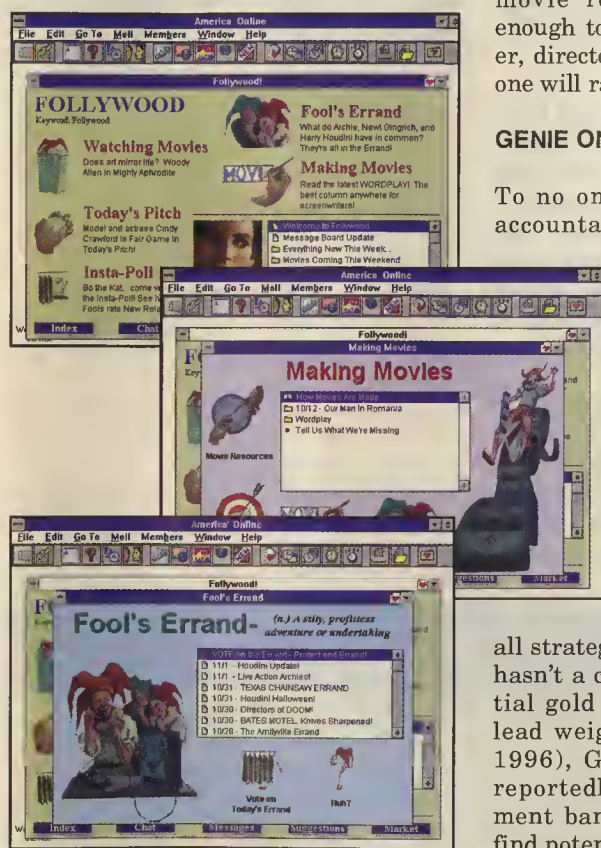
Considering that it cost over \$140 million to make "Waterworld" and yet only costs \$10 a month to feed a child in Bangladesh, it's obvious that Hollywood's

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothehat@aol.com or bo_the_cat@msn.com

priorities are totally out of whack. So if some genius can find a way for studios and investors to make a movie about feeding Third World countries, our international problems could be solved overnight.

To help create this humanitarian breakthrough soon, you might be interested in learning how the movie making industry works (or doesn't work). For those 3.5 million members subscribing to America Online, visit Follywood, (Keyword: Follywood) a new section devoted to the madness of Hollywood.

In Follywood you can buy movie-related boxer shorts, read reviews of the latest movies, scan the latest industry news about upcoming movies in production, and even take screenwriting lessons from Terry Rosio, the co-writer of the Disney animated hit, Aladdin.



Follywood is meant to be a fun place where you can actually learn something useful (unlike our public school system). Follywood gets its name from the dreams of its creators, consisting of movie fanatics, writers, film folk, and innocent bystanders, who Foolishly believe they can use the new interactive medium of online services to create a revolutionary filmmaking community that doesn't require you to live in

Hollywood and have expense accounts at all the fancy Los Angeles restaurants.

Of course, to access Follywood you must use America Online and you have plenty of patience when viewing Follywood's big windows with flashy graphics. Each time you visit a different part of Follywood, be prepared to see that dreaded dialog box, notifying you that America Online is downloading new art to your hard disk. Even at 28.8K baud, this process can be excruciatingly slow and tedious. Perhaps America Online should include the sound effects of a cash register ringing up charges to remind you that each second you spend connected translates into more money for America Online.

Despite these problems, give Follywood a visit the next time you connect to America Online. Given this wealth of movie resources, you could learn enough to become the next hot producer, director, or screenwriter that everyone will rave about.

GENIE ON THE BLOCK

To no one's surprise (except to the accountants wondering why GENie's high prices, slow baud rate speeds, and virtually nonexistent content couldn't entice millions to sign up and fork over wads of cash), GE Information Services has decided to sell GENie to the first sucker — make that the first buyer — who wants it.

Deeming its GENie consumer online service inconsistent with its overall strategy (which means the company hasn't a clue how they turned a potential gold mine back in 1988 into the lead weight of the online services in 1996), GE Information Services is reportedly working with the investment banking firm of Allen & Co. to find potential buyers.

Given the recent flurry of investment activity surrounding anything related to the Internet, perhaps General Electric could unload GENie to technically-illiterate investors who will snap up anything with even the remotest connection to the mythical Information Superhighway.

Or perhaps CompuServe will gobble up GENie much as they did with their earlier buyout of a rival online service called The Source. After all, GENie still

has 75,000 active subscribers and CompuServe needs all the help they can get to keep up with America Online's burgeoning subscriber base.

Then again, if any readers out there want to own and operate GENie as a private BBS, just cough up enough cash and put in your bid. Given the lack of interest surrounding GENie, it's possible that buying GENie just might be cheaper than buying the latest copy of WorldGroup, Wildcat, TBBS, or PC Board.

APPLE INVESTS IN AMERICA ONLINE

In a move that seems to signal Apple's abandonment of their own online service, eWorld, Apple Computer recently acquired a 5.1 percent stake in America Online, paying **\$12.5 million** for 2 million shares of the Vienna, Virginia, online service.

Since the majority of Macintosh users opt for America Online over rival CompuServe (and almost nobody cares about eWorld), this seems like a smart move for Apple to keep their investments spread around just in case the Newton bites the dust completely and the Macintosh fades into oblivion under the Windows 95 and Pentium Pro onslaught.

EWORLD IN A LAMP?

With Apple shifting their funds towards America Online and transforming eWorld into a web site, perhaps Apple should consider combining eWorld with GENie to create the ultimate online service that nobody will want to use.

Then again, eWorld may survive after all. Apple is negotiating with InterCon Systems Corporation to take over eWorld in exchange for giving Apple some of the profits. Since InterCon already provides Web browsers for both eWorld and America Online, InterCon hopes their technical knowledge can actually make eWorld profitable as a combination online service/Web site. Maybe if InterCon really gets ambitious, they can also take over EuroDisney as well.

Just in case InterCon's deal falls apart, would anyone else care to bid for eWorld? Given the Internet's rapid acceptance, it seems that a major shakedown in the online services market will occur soon. If eWorld and GENie disappear, can Delphi, AT&T's Interchange, and even the Microsoft Network be far behind?

OS/2 — ALMOST SHAREWARE

Windows 95 may have captured the headlines but IBM still hasn't given up on OS/2. Besides dropping the price of OS/2 and trying to capitalize on a name that invokes images of Star Trek, IBM insists that OS/2 Warp is alive and well.

To give you a chance to see for yourself, IBM is giving away free copies of their new "Just Add OS/2 Warp Kit" test and demo software that you can download from the IBM OS/2 area on CompuServe (GO ADDWARP). While downloading the "Just Add OS/2 Warp Kit" is free, the full file is 3.4 Mb and you will have to pay CompuServe's connect-time charges and any applicable communication surcharges.

The "Just Add OS/2 Warp Kit" allows users of Windows 95, DOS with Windows 3.1, and all versions of OS/2 to get a quick and easy look at whether their hardware is compatible with OS/2 Warp. The kit also allows OS/2 Warp and Windows 95 to co-exist on your computer, giving you a choice between operating systems, allowing both operating systems to co-exist in a dual boot environment no matter what the Windows 95 documentation says. If you prefer OS/2 Warp to any other operating system, the "Just Add OS/2 Warp Kit" will even let you uninstall Windows 95 from your computer.

While the "Just Add OS/2 Warp Kit" doesn't actually include the OS/2 operating system, the kit does include

answers to frequently asked questions about OS/2 Warp and Warp Connect, useful OS/2 tips, a list of cool places to cruise on the Internet, an OS/2 Warp demo, and more.

So if you've ever been curious about OS/2 Warp, want to support a non-Microsoft operating system, or want a time-tested 32-bit operating system, download the "Just Add OS/2 Warp Kit" from CompuServe and see if OS/2 should be on your computer today.

COMPUSERVE SETTLES MUSIC COPYRIGHT SUIT

In a legal move that could spell trouble for online services, Internet sites, and BBSs, CompuServe agreed to settle a two-year old music copyright infringement suit with the National Music Publishers' Association, a music trade organization, and its subsidiary, The Harry Fox Agency.

The Harry Fox Agency alleged that CompuServe allowed the illegal uploading, storage, and downloading of music copyrighted by several of the agency's clients. The copyrights concern the mechanical reproduction of songs, such as the reproduction of specific album performances, and not the copyrights to the actual compositions themselves.

Many of the violations were a result of users downloading songs, MIDI files, and digitized music programs from various CompuServe music databases such as Song File Bulletin Board. CompuServe claimed that the files

were not being reproduced for personal profit and thus no copyright infringements had occurred. (Then again, CompuServe did earn money from connect-time charges that people incurred from downloading files. So apparently in CompuServe's eyes, corporate profits don't count.)

As part of the settlement, CompuServe will pay **\$568,000** to the Harry Fox Agency, which will then reimburse its members for CompuServe's copyright infringement. In the future, CompuServe forum managers will be responsible for paying Harry Fox Agency members **6.6 cents** for each downloaded file.

So if your BBS, online service forum, or Internet site provides music files for callers to download, watch out. You may be breaking copyright laws by profiting from illegal distribution of music files. ♦

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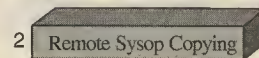
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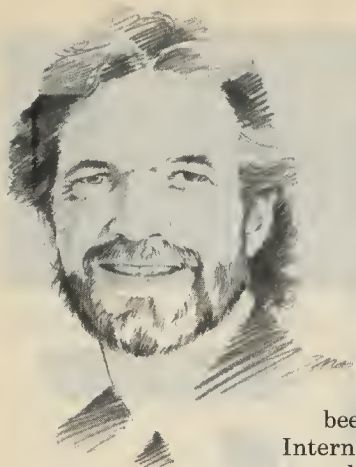
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MANNING THE WIRES

by Ric Manning

SMALL-TOWN KENTUCKY BANKERS BEAT THE BIG GUYS TO THE WEB

Ever since the World Wide Web kicked into warp speed, many of the country's powerhouse banks have been talking about opening a branch on the Internet. The number of banks with a home page on the Web jumped from about 30 in the spring of 1995 to more than 200 in November.

But when online banking actually arrived on the Web last fall, it didn't come from Wells Fargo or Bank of America. Security First Network Bank, which opened its virtual doors in October, is based in Pineville, Ky., on the western slope of the Appalachian mountains.

"We're so small, we're just a rounding error to some of those guys," said Security First's Chief Executive James "Chip" Mahan III.

But it was tiny Security First — <http://www.sfnb.com> — that was able to put together the right combination of financial resources and network knowledge to get the concept of an Internet bank approved by federal regulators.

At the same time, the bank could begin rewriting the rules for the entire American banking industry. Security First expects to compete with some of the country's largest banks, even though it has no branches, no tellers and no cash machines.

NO FEES FOR CHECKS OR ATM USE

There's something else Security First doesn't have: fees. The bank's initial product is a checking account that includes bill-paying through CheckFree and the use of automated teller machines that are owned by other banks — all without charging any service fees.

"We can do that because we have no infrastructure," said Mahan. "The other guys, they're riddled with branches and overhead."

It costs most banks close to a dollar to process a transaction with a human teller and about 25 cents when it's done at a cash machine. Mahan said transactions on the Internet will cost Security First about 2 cents. That's low enough to allow the bank to make a profit while eliminating most customer fees.

Security First is the result of a fortuitous partnership between Mahan, the chairman of Cardinal Bancshares, a Lexington, Ky. bank holding company, and his brother-in-law Michael McChesney, CEO of SecureWare Inc., an Atlanta company that developed computer security technology for the U.S. military and government intelligence agencies.

Mahan said he usually ignored McChesney's talk at

family gatherings about the Internet and the future of electronic commerce. But then McChesney sent Mahan a report about a flower shop that doubled its business after going online.

"The next time I saw him, I asked if he thought we could start a bank on the Internet," Mahan said.

Cardinal reorganized a small Pineville savings bank to create Security First. McChesney's company wrote the software to put it on the Internet. The two companies also created a new company, Five Paces Software, that will market the Security First model to other banks that want to get on the Net.

HOW TO BANK BY WEB

To interact with the bank, customers must log into the bank's site on the Web using Netscape Navigator software, although officials say other browsers may be supported in the future. The bank's Web site features a picture of a bank lobby staffed by robots to represent different bank features. A toll-free support line — staffed by humans — is open 24 hours.



Security First Network Bank Virtual Lobby

Customers with an account on Security First can make bill payments and see a current statement. They also get a debit card that works at any ATM machine. By the end of 1995, Security First planned to offer an interest-bearing checking option for customers who maintain a minimum balance and certificates of deposit.

New products planned for 1996 include a credit card, a brokerage service and loans. Customers will also be able to click on a check listed in their online account and bring up an image of the actual canceled check. Security First is also working on ways to link the bank to financial management software such as Managing Your Money.

CUSTOMER PROFILES

Mahan said he knows that an online bank won't appeal to everyone, but he's willing to start with a Net-savvy clientele. "We're aiming at early adopters

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at <mailto:ricman@iglou.com>

and Web power users," he said. "There's a group out there that could care less about visiting a branch or having a relationship with a teller."

Chuck Ogilvie III, Cardinal's Director of Retail Administration, said the first customers include "a lot of doctors and telecommunications people. They are people who enjoy the Internet and personal management software. They tell us they like the convenience of banking online."

"There is going to be a small set of people who want this kind of banking," said Steve Young, manager of electronic commerce for Input, a market-research firm, in Mountain View, Cal. "If they are able to get a major position with all of the people willing to do this, that could be a big group."

MORE BANKS COMING ONLINE

Joe Koshuta, Director of Product Planning for Online Resources and Communication Corp. of McLean Va., said he thinks Security First has a good head start on the competition, but that other banks will quickly follow.

"In theory, the Web is an ideal vehicle" for electronic banking, he said. "The Internet is going to be a very effective vehicle to sign up customers and find new ones. And if you are an aggressive bank, it's not going to matter how big you are."

Koshuta's company develops software for banks that want to offer electronic banking through dial-up connections, such as screen phones. The company also maintains an extensive list of bank sites on the Web at <http://www.orcc.com>.

He says Security First is not likely to be the only Internet bank for long. Several banks already deliver services over the telephone and some have experimented with cable TV. Several large banks have formed alliances with credit card companies, software companies, including Microsoft and Intuit, the maker of Quicken, a popular personal finance program.

SECURITY MAKES BANKS HESITATE

Banks might be moving faster if it weren't for their conservative nature and the concerns in the marketplace about Internet security. Pittsburgh-based PNC Bank, for example, offers business clients access to their account data, but only through special encrypted phone lines. The Internet, said Vice

President Frank Cushman, "is too loosey-goosey."

Wells Fargo Bank — <http://wellsfargo.com> — launched a service in 1995 that let customers view their bank accounts on the Web. But it suspended the service for several days after hackers discovered a flaw in Netscape.

McChesney says security "is an issue

Account Summary					
View Statement	View Register	Description	Type	Statement Balance Available	Discrepancy
		Regular Checking 1523-2245-3455	Checking Account	4555.00	
		Household Checking 246802	Checking Account	4555.00	4685.00
		Short Term Emergency 35791-4565	CD	1250.00	1275.00
		Long-Term Investment 150272	CD	2500.00	2500.00
				4500.00	4500.00

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that only bankers should be concerned about." The prospects for theft are minimal and all customers are protected by the Federal Deposit Insurance Corp.

Security First's prospects were good enough to attract some high-profile supporters. Two major bank holding companies — Wachovia Corp. of Winston-Salem, N.C., and Huntington Bancshares of Columbus, Ohio — each put up \$2 million for an interest in Security First

and its online banking technology.

In addition to the big banks, Security First's technology will also be used to help small banks be more competitive. The Internet will give Owensboro National Bank in Owensboro, Ky., an electronic banking option that it otherwise couldn't afford to offer to its customers, said bank President Charlie Bullock.

"We see this as the future of our industry," said Kent Ellert, president of Jefferson Banking Co., a Cardinal-owned bank that has a single location in Louisville, Ky. "The bricks and mortar associated with having numerous branches only drives the cost up for the consumer. We eliminate the need for that."

Whether Internet banking will challenge the local bank and its smiling tellers remains to be seen. "Security First is doing an interesting thing," said David Weisman, senior analyst for money and technology with Forrester Research in Cambridge, Mass. "But I think people still want a relationship with their bank. As much as people threaten to leave their bank, they don't do it very often." ♦

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MICROSOFT NETWORK NEWS

by Durant
Imboden

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network. His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. **Mailto:** Durant_Imboden_MSN@MSN.com on The Microsoft Network or writing emen.com on the Internet. The author is not an employee or spokesman for Microsoft.

Big changes have been happening at The Microsoft Network during the past month. MSN is already the fourth-largest online service, with a membership that exceeds the combined total for GENie and Delphi by a hefty margin. The network now has access numbers in more than 1,000 cities around the world. MSN's client software is available in 26 languages, and users are billed in 19 currencies.

The Microsoft Network's Internet support has continued to grow since launch. By the time you read this, MSN is likely to be the nation's second-largest Internet service provider after Netcom, and local POPs with support for 28.8Kbps modems and ISDN will be available to nearly 80% of America's population. European cities will be added to MSN's TCP/IP network early in 1996, and plans for a Japanese network have been announced.

Members anywhere in the world can now access MSN via the Internet, using local access providers and paying a reduced fee for MSN's services. A recent upgrade of MSN's client software has improved performance noticeably, even for bandwidth-hungry MediaView titles like MSN Today. A major new client release in February will make the service easier to navigate and use.

For potential independent content providers, the biggest news is MSN's decision to reevaluate its policy of working with ICPs — more specifically, by providing greater integration between MSN and independent commercial sites on the World Wide Web. Details weren't clear as we went to press, but businesses of all sizes can expect to see a greater choice of marketing and publishing opportunities on MSN in the months ahead.

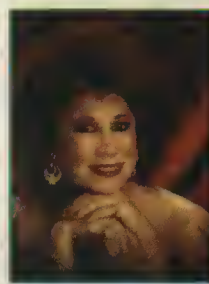
FROM GODS TO DEMIGODS: SYSOPS SPEAK OUT

It's no secret that the growth of online services and the Internet has been accompanied by declining traffic on many local BBSs. Some BBS operators have reacted by marketing Internet access at competitive prices, while others have used their BBS experience to obtain jobs as online sysops or corporate Webmasters.

At the request of Boardwatch, I asked MSN sysops to make a comparison between the godlike role of an independent BBS operator and the mere demigod status of an MSN forum manager, category manager, or ICP. Here's what I heard:

Barbara Mallut

"I'm the sysop of a 16-line BBS in Los Angeles that has been online for more than three years," says Barb Mallut, a contract forum manager who runs the *Chronic Disease & Disorders Forum* on MSN. (Go to \ Other location \ ChronicDisease.) "I run seven BBSs on one system — *Blazin' Bytes*, a social and entertainment board at (818)776-2792 — plus six chronic diseases and disorders boards."



Barb Mallut, BBS
and MSN Sysop

A little over a year ago, Barb launched her first health-support BBS after discovering that her own condition, Parkinson's disease, had received virtually no attention in the BBS community. "I managed to find one board, but it was very dry and didn't have much activity. So I talked to Dr. Robert Iacono of the Movement Disorder Team at Loma Linda Medical Center about the idea of a Parkinson's

BBS. He and his team got excited by the idea and agreed to sponsor the BBS by providing upfront money for programming."

The board was a success from day one, and it wasn't long until people who suffered from diabetes, agoraphobia, and other conditions were asking for BBSs of their own.

Barb became involved with MSN after a sysop friend told her that, with her subject expertise, she'd be a natural for Microsoft's new online service. "I sent in a proposal for the Chronic Disease and Disorders Forum, and the rest is history," she says.

Barb's MSN forum covers much of the same territory as her Los Angeles-based collection of BBSs. There are differences, however — starting with the fact that MSN is based on Windows 95, while her BBS software is the DOS-based TBBS.

"I've always thought of myself as a DOS person in a Windows world," she concedes, "but MSN's tools really are remarkable. Instead of designing a board and having someone else do the programming, I can do my own layout and customizing on MSN. I'm liking it more than I thought I would."

According to Barb, The Microsoft Network provides a different user experience — and, as a consequence, a different sysop experience — than a local BBS. "The

BBS is more 'real,'" she explains. "I have get-togethers with my Los Angeles users every two weeks, so there's more fun and social contact. Because MSN draws users from all over the world, there's less real contact even though there's a great deal of mutual support and camaraderie. What's nice about MSN is the fact that all my 'boards' are in one forum, which leads to cross-consolation by members. People with Parkinson's might go into the the cancer area and provide reassurance. There's a commonality in suffering."

When asked if MSN's rules and procedures bother her, Barb responds: "On my forum, I can do whatever I want. Because Microsoft's guidelines are so reasonable, there are no real limitations for my forum."

Tony Kendall

"I was a sysop for a local BBS in Lexington, Maryland from 1987 to 1990," reports Tony Kendall, who operates the Friends of Europe Forum on MSN. (Go word: Europe.) "I learned a lot from the experience — how to handle people, and how much fun it is to create a world."

While some of Tony's friends were becoming burned out by the pressures of managing BBSs, Tony flourished in the online world and watched his hobby grow until he was offered a forum on GEnie.



**Tony Kendall,
Friends of
Europe Forum
Manager**

"Now that I'm on MSN, I feel that I'm really in the majors — with more power and a bigger audience," Tony says. "I can also do a lot of things that weren't possible when I still had 300-baud visitors. On MSN, we can post graphics of each other, sound files, and other neat things that were just beginning when I started my BBS."

Tony admits that he sometimes misses being a sysop on a local board. "I had godlike powers — and if someone didn't like it, I could tell them to go to hell without my decision being reviewed and critiqued. If there was a revolt, I could just pull the plug. I think it was more of an adventure then — less of a business — and that's the part I miss."

The good side of being with an online service, according to Tony, is having access to a worldwide audience. "Yes, I lost some of the homeliness of a small BBS. But now I can remember having chats from a war zone in the former Yugoslavia, the first online chat after the reunification of Germany, and all the Oktoberfest chats that I've had. None of these would have been possible on my little BBS. However, one thing is the same: A sysop has to be a diplomat. Despots are soon gone."

Tony says he continues to have admiration for sysops of local BBSs. "We are of the same breed, and someday I might return and do a local board because the intimacy is just not there on the commercial systems. I'm glad that I'm a sysop on MSN, but I've still archived, as if frozen in time, 'Kendall's Korner' circa 1989... BBS postings waiting to be answered... a living thing made up of bits."

Celeste Mendelsohn

As a category manager on MSN, Celeste Mendelsohn performs a variety of sysop duties but doesn't have a forum to call her own. This may be one reason why she continues to operate the Motherboard BBS at (800)862-3003, which is now the oldest bulletin board system in Los Angeles after 14 years of continuous operation.

"The Motherboard is a social BBS," Celeste explains. "I bought it five years ago, and today it's a 42-line system with Major BBS software and full Internet connectivity."

Celeste landed her MSN category manager's job in a roundabout way, having signed on as a forum manager after attending an MSN recruitment meeting at ONE BBSCON in 1994. "I was going to manage the Seniors Forum when I learned that an independent content provider called SeniorNet was coming online. There appeared to be a duplication of content between my forum and SeniorNet, and I was afraid seniors might get confused and leave. I offered to bow out, but MSN

wanted me to stay with the system, so I became a category manager.

"The idea of letting go—of realizing that MSN wasn't mine, but Microsoft's required a different mindset from a BBS sysop's," Celeste says. "With my own BBS, I have a tendency to be proprietary. But I seem to be getting better at letting go and delegating responsibility on the Motherboard, maybe because of my experience with MSN."

Celeste feels that, in several respects, working for MSN is much easier—or at least more satisfying—than running a BBS. "A board can be an administrative hassle. I have to verify users by calling them, place advertising, worry about phone lines acting up in the rainy season, and deal with the phone company. I also make more from MSN than I do from my BBS, and it's great to be paid for what I do."

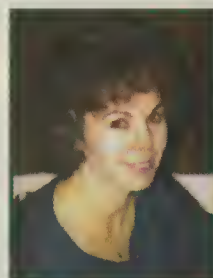
The downside, according to Celeste, is less personal involvement with users. "The Motherboard is a social BBS, so we have a lot of parties. My users have become my friends. We socialize in person at least once a month. Maybe it's just my perception, but there isn't quite the same family closeness on MSN and the other large services."

Loss of control is another negative. "On my BBS, I don't have to be politically correct. The bottom line is that it's my BBS, and if people don't like it, there are plenty of other BBSs in L.A. On MSN, I have to be polite. I can't lose my patience. That's what they pay me for — to be nice and not say 'Kiss off' to people who grumble, whine, and complain."

Still, on balance, being with a major online service is an opportunity that Celeste Mendelsohn wouldn't want to miss. "MSN has made being a sysop a profession—an accepted career instead of a hobby. It's a real step in a positive direction, and it's opening new horizons for me as a sysop."

Darren Nye

After running up a \$300 bill during his first month on CompuServe 15 years ago, Darren Nye of Edison, New Jersey quickly discovered the advantages of local BBSs. "I was overwhelmed by the idea that you could call a bulletin board without having to pay for it," he remembers. "Not too long after that, I downloaded BBS software for my Tandy Color



**Celeste
Mendelsohn,
Motherboard
Sysop**

Computer and started running my own bulletin board."

In the intervening years, Darren has owned or managed a number of BBSs — including GLEAM, the 13-line "Gay/Lesbian Entertaining Adult Mecca" board at (908)758-1122 that he operated from his home until accepting a forum manager's job with the *PlanetOut* gay, lesbian, bisexual, and transgendered area on MSN. (Go word: PNO.)

"Originally, I planned to have my own forum on MSN," Darren explains. "I submitted a business plan to MSN about a year ago, only to be told that Tom Reilly, co-founder and co-director of *Digital Queers*, was already working on creating MSN's gay/lesbian area. After I met with Tom and got to know him, he hired me as the forum manager for a new service called 'PlanetOut' that will be on MSN, America OnLine, the World Wide Web, and other networks."



**Darren Nye,
Gay/lesbian
Forum Manager**

Darren's new job is keeping him busy, since PlanetOut's goal is to become the largest online provider of gay/lesbian content. The company's MSN forum has attracted a large audience since its beta days, and Darren expects that his current position will soon evolve into a full-time job.

Unlike the other sysops in this month's column, Darren feels that MSN's sysop tools aren't as flexible as a typical BBS package. "With BBS software, you can do an infinite variety of things through your own coding," he says. "With MSN, you're limited to chat areas, BBSs (message boards) and other standard objects. This ought to change substantially in the future, when we'll start linking to our own servers and Web sites. That should open a whole new realm of possibilities."

Is censorship a problem for a gay/lesbian forum on a worldwide service like MSN? "It hasn't been an issue for us," Darren claims. "We don't have any nude photos, partly because MSN doesn't allow them but mostly because we don't want to attract that kind of audience. Otherwise, we face the same legal issues on MSN as we would on a BBS — except there's probably a bigger risk of lawsuits on MSN. People

know Microsoft has a lot of money, and they assume that we have money, too."

When asked what he'll miss most when he turns his GLEAM BBS over to another operator, Darren is quick to answer: "I don't know that I'll really miss anything. I know I won't miss being Mr. Technician or dealing with the phone company. My friends joke that I'm a control freak, and I guess part of the joy of having a BBS is that you can do when you want when you want to do it. But once I started charging for access, it became different — my board had to satisfy the customers. That paved the way for MSN."

Darren adds: "MSN is such an immense opportunity, with access to more people than I could ever reach with a BBS. Also, we're going to be setting up regional areas as subforums within PlanetOut. That means we'll have the best of both worlds—an online service with smaller boards that feel like regional BBSs." ♦

A large advertisement for Cinecom Desktop Conferencing. The background is dark blue with a glowing purple sphere in the center, surrounded by white lightning bolts. At the top, the word "CINECOM" is written in large, stylized, light blue letters. Below the sphere, the text "DESKTOP CONFERENCING" is written in large, bold, white letters. Underneath that, the phone number "703.680.4733" is displayed in yellow, followed by the website "http://cinecom.com" in white, and the phrase "AVAILABLE NOW" in large, bold, red letters. On the left side, there is a window titled "CineTalk" with a menu bar "File Setup Help". Inside the window is a video feed of a woman with dark hair, smiling. Below the video feed is a name tag that says "Heather Taylor". On the right side, there is a window titled "CineVideo" with a menu bar "File Setup Help". Inside the window is a video feed of a man with short dark hair, smiling. Below the video feed is a name tag that says "Bob Summers". In the top right corner of the advertisement, there is a small globe icon.

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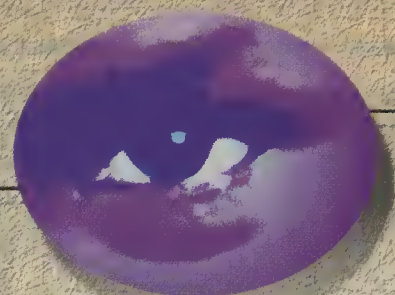
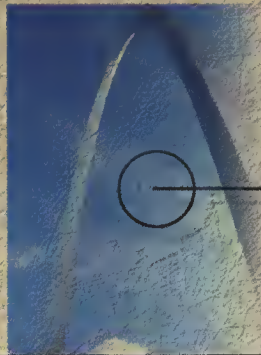
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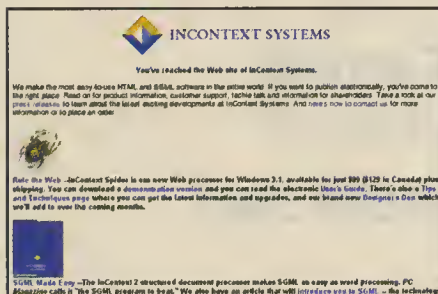
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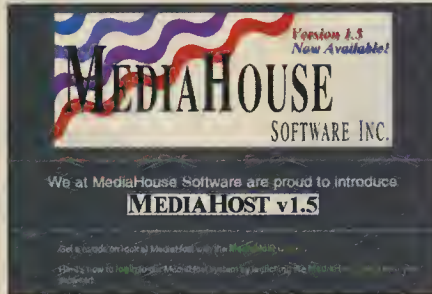
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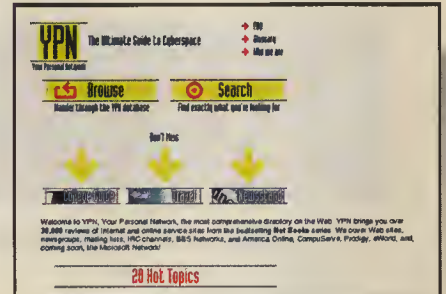
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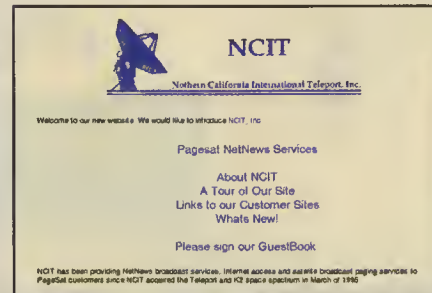
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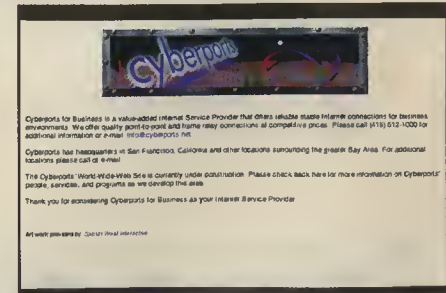
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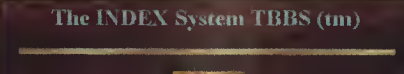
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DIRECT DIAL

by David Hakala

CANADA'S BBSI - THE SYSOP MAKES HOUSE CALLS

Digital Equipment Corp. is running TV commercials based on the slogan, "Whatever it takes." DEC might have stolen that line from Jean-Francois Laplante, a 26 year-old Wildcat! sysop and founder of **Internet BBSI** in Sept-Iles, Quebec, Canada. The BBS can be reached at **(418)968-3282** or <telnet://bbs.bbsi.net>. Internet BBSI's Web site is at <http://www.bbsi.net>.

Jeff, as he likes to be called, started his ISP business in September, 1995, and immediately ran into serious competition. Quebec Telephone, his regional telco, introduced truly universal Internet service - even towns of 250 people have local-call access. A private competitor opened in Jeff's area with 28 SLIP/PPP lines and an expensive advertising campaign, thanks to loans from the Canadian small business assistance program. All this in a market of 30,000 people, and within a couple of weeks of BBSI's debut.

Jeff started with one 56Kbps leased line at a cost of **\$1200** per month including Net access. He uses Merkwurks' IPdoor software to provide SLIP/PPP access via the BBS, which enjoys 175 paying subscribers. Funding comes from savings from his job as a cost analyst for Iron Ore Company of Canada - which Jeff quit when he started the ISP business - and some capital from a private investor.

Advertising is not in Jeff's budget; but whatever else it takes, he does it. He fields technical questions about PCs and communications on a local radio show. He provided Internet training for the staff of his local TV station and enjoys a good rela-

tionship with them. He builds homepages for museums, the chamber of commerce, schools and other community resources.

The guy even goes to the home of every single SLIP/PPP customer he signs up to configure the customer's modem and software. Talk about getting close to the customer! Jeff says this uncommonly personal service pays off in fewer tech support calls as well as the obvious goodwill it creates.

Jeff doesn't charge any setup fees, as Quebec Telephone does. His fee structure is unusual in its simplicity. Customers buy **\$40** worth of credits at a time and spend them at whatever rate they wish on either the BBS or Internet services. Internet time costs **\$0.80** per hour (versus the telco's **\$0.95** per hour), while BBS time goes for just **\$0.16** per hour. That works out to 50 hours of Internet or 250 hours of BBS for your \$40.

Customers tend to spend their money over longer periods of time under this billing arrangement, and there is no "gravity" from customers who pay a minimum fee but don't use the services. So Jeff needs more customers at any given moment to break even. He says it takes 50-60 hours of daily Internet use to cover his bills, difficult with an 8-line system but doable with the 12 lines he plans to reach soon. Having the business based in his home helps keep expenses down, as does the assistance of his girlfriend, Ann. Jeff also makes money designing businesses' web pages at **\$50** per hour and consulting in the areas of computer systems, financial and general management.

David Hakala first appeared in **Boardwatch** in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at **BW** in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book **Hot Links** with Mark Eppley, CEO of Traveling Software, and penned his own book, **Modems Made Easy**, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at [mailto:david.hakala@boardwatch.com](mailto:malto:david.hakala@boardwatch.com) or at (303)973-6038.



Jean-Francois Laplante and partner Ann

It's a precarious living, a far cry from the substantial salary and relative security he enjoyed with one of the largest corporations in Canada. But Jeff says, "I decided to do what I love. I'm a little scared sometimes, but it's always exciting."

Jeff is no stranger to risk. He started his first business (a photo studio) at the age of 16 and worked his way through college with various entrepreneurial ventures. He recently discovered the sport of indoor wall climbing (we've done that for years here at *Boardwatch*) and says, "Facing a wall and having to climb it reflects many aspects of a sysop's life."

Achieving profitability is Jeff's immediate challenge, but it is not the only reason he got into the online business. He discovered BBSing in 1989 while at college working towards a baccalaureate degree in management. He was seized by the vision of what global connectivity could do for small communities like his native Sept-Iles. Upon graduation, he returned home and found there were no BBSs in town – so he started one. Of course, there were no modem users, so Jeff organized free education and training classes to build awareness of the social and economic potentials of the online community. He created customers one by one, charging \$20 a year at first to cover the cost of the Fidonet and other echomail networks he brought to Sept-Iles. Today, his BBS pulls echomail, UUCP mail and files via a Planet Connect satellite feed. Always, he's maintained a family and community oriented system, eschewing the easy money of adults-only material.

"The BBS is a money-pit," says Jeff, and always has been. But about 10 percent of his customers – the earliest ones in most cases – are stuck with 2400 bps modems and ASCII/ANSI terminal software. Jeff maintains the BBS out of loyalty to these technology-deprived customers.

Not surprisingly, Jeff is faring well against his competition. Telco customers come to him for better prices and unheard-of service. His government-financed competitor has not been able to fill 28 lines, and now the loans are coming due; overhead is becoming a taller wall while Jeff nears the top of his. Meanwhile, Jeff continues to grow – one extraordinarily satisfied customer at a time.

THIS MONTH'S LIST: 604 SAN DIEGO, CALIFORNIA BOARDS

Joe Nicholson runs the *911 BBS* at (619)669-0385 partly as a service to the firefighting community – of which he was a member for 14 years – and partly to provide a useful list of BBSs in populous San Diego County. The county's telecommunications structure is severely fragmented with some 32 exchanges, most of which are toll calls to each other. *ComputerEdge*, a free distribution local computing newspaper, includes a BBS list, but it did not provide the names of cities and towns. Joe adds this information to his list to help users avoid unintended long-distance charges.

The 911 BBS is a Renegade system running one 14.4 Kbps modem using

FrontDoor. Nicholson says he gets about 30-35 calls per day and spends about \$30 a month to maintain the system. He also spends fifteen hours a week compiling and verifying his list, using local-exchange lists and sysops' submissions as his raw material.

While the BBS caters to law enforcement, health and safety officials in general, firefighters are Joe's main focus. When he first looked at the San Diego BBS scene in 1990, he found three boards devoted to law enforcement matters but none for firefighters. So the main menu of the 911 BBS is dedicated to "The Indian Springs Fire Department," a fictitious unit that reflects Joe's original audience. About half of the firefighters who patronize the board log on from their fire stations; apparently, firefighters have found something else to do besides play chess and browse *Playboy* while waiting for alarms.

The system now includes some 260 conferences, most of which are open to the public as well as safety officials. Some, like PoliceNet, are restricted to professionals; Nicholson must verify the credentials of callers who want access to PoliceNet conferences. Nicholson is also a ham radio enthusiast, and the board sports an extensive array of files and conferences for hams.

Our list of San Diego County BBSs omits city names for space reasons, but we have sorted the list by phone number so that residents can easily find a board in their local exchanges. ♦

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I.D.E.A.	220-0136	Galactic Universe	277-4415
JBBS	221-0311	Lab (The)	277-5041
Friendz BBS	222-1099	Belexes	278-0043
San Diego Sybase Users Group	223-0720	E & S Systems 1	278-3905
Digital Circus	223-5348	GCG Programmers' BBS	278-5469
Dragon's Aerie	223-9022	Random Access	278-6467
Dragon's Aerie	223-9239	Pacific Rim Info 1	278-7361
Marine Advisor	224-0004	Wee Cabin 1	278-9955
Psyberchosis BBS	224-0623	Over The Line	279-1930
On The Edge of Time	224-1264	RadioSport! WA6BD	279-3921
Rat's Den	224-1840	The Way It Was	279-5735
Panda Line Anime BBS	224-2911	Nuts Online	280-1507
Ocean Beach	224-4878	Global Cyber-Media BBS	280-5309
San Diego Legal Network	224-8911	Hale Telecommunications	280-7775
Satellite Data Systems	224-9943	Ads at the Park	281-0123
SanDos	225-8173	General 1 Public Line	281-4185
Collectors' BBS (The)	226-1856	Myth Haven	282-3522
Livingston's Discovery BBS	226-3417	Zero Wait States Node 1	283-3507
World Parks BBS	226-8257	Programmers Workshop	284-0799
Magic Ink	229-1046	Interface	284-1411
Fetishist BBS (The)	229-8412	Open Forum	284-2924
Andros	233-6253	Vespa Connection (The)	284-3151
OrFun Sector Sweeperz	233-8548	Gene's BBS	285-1730
Sand Storm! BBS	258-0681	Illuzions	286-2248
Enterprise 1701-E	258-1222	Walden's Computer Hut	286-3475
Hawk's Nest BBS (The)	258-1268	Descender HQ	286-5073
Sand Storm! BBS	258-7263	East County Repeater Assn	286-8918
Mystic Tower BBS	258-8548	Video Store BBS (The)	286-8949
SSC BBS	259-5554	Walden's Computer Hut	287-2124
Matchmaker 1	259-7757	Darkstar BBS	287-2573
UFO BBS (The)	262-2134	Molten Slag BBS	287-3749
Formal Attire BBS	263-3212	Loan Base BBS	291-3821
Southern Cal Com.Group	263-9135	Pea's Keep	291-6746
Anarchy X	264-4251	Alabaster's Cove II	292-0122
Jim's Place	264-7500	Knights' Rebellion II	292-0150
Douger's Den Free Speech BBS	265-8375	Southern Cal Graphics	292-0186
Bell Computer-Math-Science	267-2807	Tierra-Miga	292-0754
Walton's Mountain BBS	267-3352	Paradigm BBS	292-5193
Molokai Express BBS (The)	267-3953	Alabaster's Cove II	292-5517
Sound Systems	267-7140	Matchmaker 3	293-0706
Fantasy Playhouse	268-3325	Orphan Board West	293-3600
Christ Line	268-3568	Appleton II	294-7128
Metal Works	268-4139	Raven's Roost	296-6890
InfoNet BBS	268-7799	San Diego Electrical Community(I.B.E.W.)	298-0844
Equinox BBS	268-9732	Unitarian Universalist BBS	298-3616
Audio World	271-0061	M2	298-6976
Computer Home BBS	271-0078	American Commonwealth.Univ.	298-8075
Dream Net	271-0903	Osborne DOS CP/M UserGrp	299-1604
Rose & Crown Pub	271-6841	Environmental BBS Sierra Club	299-4018
TradeWinds BBS	271-9969	Environmental BBS	299-4032
Coco Exchange	272-3643	Dog's House (The)	299-5760
Rockets! BBS	272-3723	Golden Ree	390-0351
PC LawCom	272-6615	Dark Side of the Modem	390-3301
Tri-Rom BBS Node 3	272-9158	I Don't Want to Grow Up!	390-4542
CIA	273-6339	Lakeside Wildcat 1	390-7328
Tri-Rom BBS Node 1	274-1067	SLIC Public Service BBS	390-7542
End of the Night (The)	274-1508	Wee Cabin	417-6395
Gold Prospector/Rock Hound	274-5062	Classified Ads BBS	420-1407
H.E.L.P. Info	275-0146	Mother Board (The) 1	420-1702
Alien Biker Kat	277-4140	Metal Shop (The)	421-3528

COUNTY, CALIFORNIA BBSs

Tennis San Diego BBS	421-4204	Pyrotronics	445-8750
J & J's Hot Rock BBS	421-6409	Dream Machine BBS (The)	447-0044
MBC Broadcast	422-0239	On-Line and Live	447-3944
Infinite Thrills	422-6604	Third Wish	447-3944
Music Shop BBS (The)	423-4970	Hiawatha's Jolly Wigwam	447-4332
Dark World BBS (The)	423-9029	Virtual Palace	447-4411
My Dog House	424-5216	Modem Magick 16 lines	447-5010
TreeHouse BBS (The)	424-6375	Weather Satellite BBS	447-6480
Query WILDCAT! BBS (The)	424-7268	Opportunity Board (The)	448-1982
Gone to the Dogs	424-7746	Lottery Board (The)	448-3929
Latin BBS (The)	425-7104	Shakey Jake's	448-6470
Latin BBS (The)	425-7681	Electronic Flight Group	448-8275
H2H BBS	426-0073	Institute for Creation Research	448-9082
El Aleman	426-9196	Guacamoli Pit	449-1773
Schrödinger's Cat Box	426-9686	Viper Pit	449-2219
Shattered Land	427-2577	Catholic Info Network	449-6030
Troll Booth (The)	427-4368	Dragon's Nest	449-7052
Butthead's BBS	427-6908	Software Products Intl	450-2179
Electronic Classified BBS	428-0169	Sea of Green	451-2174
Woodstock Computer Service	429-5932	Top Flite	452-1806
Run For The Border	429-6910	SpamDiego	452-2846
Tailhook's Place	430-1447	IEEE S.D.	452-3131
Green Beach	430-0588	Elektronic Schoolhouse BBS	452-3864
Mach One BBS	430-1141	Pacific Data Products Support	452-6329
CompuTronics	430-1142	Young America BBS	452-8683
Wizards Lair	430-7710	NetLink Online Comm.	453-1115
Mo's Ark	430-7919	Enigma:Next Generation	453-1819
Stac Technical Support	431-5956	City of FarHaven	453-2091
Space Bar BBS	433-4653	San Diego Media BBS	454-1629
Nassau Xpress	433-9777	Elephants Graveyard	454-8412
Haven 4 ModmAdcts	433-9831	Comedy Store (The)	454-9410
Yes BBS	434-0177	Dial n' Cer	455-3900
Ratt Trap BBS	434-7635	New-Ware (Shareware support)	455-5226
Daily Calendar BBS	435-0036	Friends of Mine BBS	455-9692
CHS BBS (The) Coronado High	435-0819	Coconet Computing	456-0815
Ship to Shore	435-3187	San Diego NeXT Users Group	456-2522
Satori BBS	435-6056	Our House Node 1	460-8507
Asteroid M	436-2049	Ziggy's Den of Iniquity	460-9508
ABC Fun Keys	436-3525	ProLine amber	460-9762
Sushi Z BBS	438-0114	Drive-In BBS (The)	461-0476
Science Explorations BBS	438-8354	Pro-Data Computers BBS Node 1	461-1756
Death Row BBS	439-3775	Tri-R-BBS	461-1916
Mainstreet Data Node 1	439-6624	Aquarium	462-1732
Death Row BBS	439-9686	Camelot 3000	462-6587
Crest Mountain BBS	440-1674	ArtWorld	462-6887
Data Xfer BBS	441-0183	Dreaming City (The)	462-7146
Icepick	441-2605	Dreaming City (The)	462-8406
East County Connection	442-5833	Possum Hole BBS	463-2227
Amiga Central	442-7030	Amiga Computer Graphics	463-3230
Iceman BBS	442-7552	Plague (The)	463-4627
Ed's Conference Call (1900-07)	442-8655	ZenWest	463-9378
Ventrainiam BBS	442-9414	Coupon Computer	464-0501
Greyskull BBS (The)	443-0500	Mouse Trap	464-2134
Fur Elise BBS	443-2630	AGA Amiga	466-2317
Forge (The)	443-3309	Empowering Change	466-3898
Slinky's Place East	443-9283	Laser-Point BBS	466-8026
Wave of the Future	444-6851	AGA Amiga	466-8785
Ice Cavern	444-7028	Gandalf's	466-9505
Alpine Wildcat! Node 1	445-6028	Tomato Asylum	467-0128
Sudden Impact BBS	445-7494	Politically Incorrect BBS	467-0279

SAN DIEGO

Biven's Legal Action Movement	467-0666	Naval Hospital, S.D.	532-9451
R & R BBS (The)	467-9035	UCSD Library - Centaur	534-6908
Conflicts BBS	469-0667	Mac's Place - UCSD	534-8195
Maroon BBS	469-8258	Willy Net	535-0816
LCS Realty BBS	470-1932	Mushin 1 - 10 Public Lines	535-9580
BJ'S Place BBS	470-8044	Workforce Information Network	536-2972
Matchmaker 4	471-0870	Grizz's Domain	538-2693
Valley Oaks BBS	471-7509	Gilligan's Island BBS	538-4358
BeerNut BBS	474-0328	Kessels' Kantina	538-5390
Revelation CBBS	474-5847	Dante's Inferno Public	540-2876
Reflections BBS (The)	475-2277	Command.Com BBS	540-8237
Amiga & IMB Online	477-0246	Obsession BBS	541-0368
Silver Circuit (The)	480-0146	Swamp BBS (The)	541-0966
Cougar Country	480-3056	JT's Rival	541-0976
Lycaenum (The)	480-5516	California Blondes Etc.	541-1021
Seaside Connection 1	481-6479	About Town	542-0906
Tofu	481-8646	Matchmaker 2	546-8549
Shadow World	482-0742	Rendezvous 7	548-0509
San Diego Comm Link	482-2220	Funn San Diego	549-3866
TBC - The Business Center	482-8675	OS/2 Connection	549-4215
SuperMAC BBS	482-9606	Fanciful BBS (The)	549-6685
Graphix F/X	483-0423	Digital Modelers' BBS	551-4061
PC LawCom	483-1323	HUD	557-6135
Sports Card Show OnLine	483-2565	Hero's Network	558-3413
Milo's BBS	483-4108	Late Night Loser's Lounge	558-4683
Ashley's	483-4283	UCSD Annex	558-7047
Dollars & Bytes	483-5477	Team Amiga	560-0155
Smitty's	484-1133	SkyWatch BBS (SDAA)	560-5957
Dragons of Autumn Twilight	484-1278	Techno Systems BBS	560-9227
Dreams of Autumn Twilight	484-1278	Inside of My Head BBS	560-9362
Kasterborus Constellation	484-9351	Seductive Dreams BBS 4 lines	560-9453
Nexus Point (The) 1	486-0529	Corner Mail Box BBS (The)	561-2961
Software Network 1	486-1201	USS Perpetuators BBS	561-4681
Yellow Jersey	486-1201	Hobby Shop (The)	561-5384
Scribbles BBS	486-6114	Silver's Cave	561-7206
Warner Brothers	486-6626	Hiram's Valle	562-0137
Psychologist's Office	486-7259	Foy's Trading Post	562-3646
Lightning	486-9032	Dragon's Dreams	562-3928
Freedom	486-9075	Hop>Link	562-4375
Quest! BBS	487-5045	Laughing Academ (Public)	562-6337
Assorted Pleasures BBS	487-6356	Dragon's Dreams Elite	562-7410
Abba II CBBS	487-6391	Santee Micro	562-8735
Abba II CBBS	487-7746	Normal Heights BBS	563-4047
Deep Fur Six	488-5889	System Support BBS	563-9207
Comic Book Collector's	488-6646	F.I.S.H.	565-8406
Castle of Deception	488-7784	Priests and Paladins BBS (The)	566-0870
Abyss BBS (The)	489-2841	Game Galax	566-1485
Stand (The)	491-0776	Classified Connection	566-1745
Astro OnLine	496-3846	Death Row BBS	570-8324
Analog Man	497-0113	TLC - The Local Connection 1	571-3110
Telesis Node 1	497-0497	The Edge BBS	571-3560
USS Enterprise NCC1701D	497-0541	Mike's Pro Shop	571-5326
Cornerstone Online CBBS	498-1751	Mac Generation	571-6366
Swamp City	507-9267	ComputerEdge Online 1	573-1675
Heart-On San Diego	521-0900	Nuts Online	575-2390
Stratsys Public	521-1615	Gulde of High Sorcer	575-8249
Byte's Realm	521-1681	Tele-Mac SD Mac User Group	576-1820
Sin-Cit	528-0506	Papa Smurf's Village	576-7227
Possibilities BBS	528-0579	Multi-Media Support BBS	578-0064
PCH Graphics	528-1546	Scanline	578-1462
Mirage BBS (The)	530-2070	U.N.C.L.E.	578-2145

COUNTY, CALIFORNIA BBSs

Data's Da	578-2761	Vitality Director	634-1912
Ten Forward BBS	578-8735	Oyster Cult BBS	634-3544
Surface Mount Tech.Assn.	578-8958	Programmer's Connection	656-1258
Marzland	578-9086	Slim's BBS	656-5594
Hertzian Intercept	578-9247	ByteMine BBS (The)	660-9129
Galactic Scholars	579-0430	Sanitarium BBS (The)	669-1620
DJM 2	579-2642	Micromiga	670-1095
MortgageWire BBS	579-7814	Dante's Inferno Members	670-1459
Pacific Beach	581-0776	Rudy's Place	670-3040
Service Center	581-0776	Final Experience	670-4445
DeadLine BBS	581-1384	ProLine sol	670-5379
Race Shop BBS (The)	581-3175	Wedding Store On-Line	670-5868
FarOut BBS	581-9049	Dante's Inferno Public	670-6954
Scanin BBS	581-9262	Obsession II BBS	670-9680
Seastalker	581-9397	SuperByte! BBS	670-9825
Brian Smith's	582-0875	San Quinton BBS	673-0726
Free Zone CBBS	582-2402	San Diego Oracle Users Group	673-3023
Phil's House	582-2491	Ready Room	673-4016
EALYOB	582-2718	Torque & Recoil BBS (The)	673-8945
No Such Luck BBS	583-5379	Vinegaard Keep	673-9292
West Coast SearchLight	583-7901	Dream Net	673-9613
Battle Bridge	583-9901	Eagle's Nest	673-9869
Robbers Realm BBS	584-0043	Braddock Manor	675-7081
San Diego On-Line	584-1668	Alpha Complex 8-lines	675-8190
Byte's Realm	584-8228	Magna Comp	677-3930
Ocean Sports CBBS	586-1880	M2	678-0960
Buzzard's Roost	588-0672	E-Mall Powa	679-9327
DJM 1	588-6941	San Diego County Info Network	685-2366
Jim's East County BBS Node 2 FL	588-8725	Novell Users Group	686-6196
Comm Port (The) 1	589-0265	Inc. IT!	687-3930
Inn of the Last Home	589-6516	Mental Playground	688-9437
Comm Port (The) 2	589-8091	Rendezvous 5	689-0329
Place of Magic	591-3063	Possibilities BBS	689-0495
Matt's World	593-0747	Pacific Coast Tech Support	689-2420
Portal BBS (The)	593-1730	Rendezvous 1	689-8550
Shareware Express	593-7059	Visionary Graphics	690-6248
Next Generation (The)	593-8493	BBS RoadKill	690-6502
Metal Den	593-9761	Shooter's BBS (The)	691-0233
CMS: SDSU	594-3428	Computer Plus	691-7862
Firewalker's Flames	596-0240	Rendezvous 2	692-0563
L - E Online	596-0870	Sabaline	692-1961
Brokedown Palace	596-1974	Lips BBS	693-0735
CH Products BBS	598-3224	CMS: US	693-4582
Multimedia Madness BBS 1	598-9203	West Coast University	695-1098
Valhalla 1	598-9652	CyberLand BBS	695-2564
Information Exchange BBS (The)UI	599-4798	Dream (The)	695-3515
OS/2 Archived	599-6618	Written Worlds Sci-Fi BBS	697-4073
Family Historian	606-2730	Murphy's Law BBS	698-1547
General Giffy Online	624-9300	Swap Shop II (The) Node 1	698-2459
Insight BBS (The)	630-2069	Coleman College Assn. BBS	698-6982
Covey's Concepts	630-3478	IMRU University BBS 10 lines	701-5229
Entropy BBS	630-4228	Data's Da	701-8425
Splitter BBS	630-4262	Oyster Cult BBS	709-1191
Bonsall Blaze BBS	630-5575	Bicycle Bulletin Board	720-1830
Future Technolog	630-6605	Landing Strip (The)	720-9549
Shepherd's Flock Family CBBS	630-7437	Rosicrucian Fellowship BBS	721-1828
Attron	630-8375	Time Machine	721-2803
Silicone Pub	631-0669	Techno-Bard BBS	721-9263
Command.Com BBS	631-1845	Virtual Dimension (The)	722-0746
Programming ++	631-8135	Fit It Shop	722-1386
On-Line Ads	632-5031	DocNet Windows BBS	722-4390

SAN DIEGO COUNTY, CALIFORNIA BBSs

Pleasant Board (The)	722-8457	Estranged Empath	756-9213
Mike's C-Board	722-8724	Oceanside Bearcave BBS	757-3279
Fallbrook Fire BBS	723-1698	Round Table BBS	757-3356
Master Thieves Guild (The)	723-1745	Dojo BBS (The)	757-6817
Blazing Realm BBS	723-9444	Yat - Yas	757-7236
Vorpal Bunn	723-9984	Mac In Touch	757-9850
Outer Dimension	724-1931	Dr.'s Office (The)	758-1484
Midnight Oil	726-6347	Mountain BBS	765-1340
Buzzard's Nest	726-9329	S.I.G.H. Amiga	788-0449
Ghost Town	726-9914	Travel Port (The)	788-0861
Clone Builder	728-0541	LEH	788-1731
Zion Lutheran Church	728-3644	J & D's BBS	788-6198
File Bank	728-4318	Mustang Shop Node 1	788-7017
Destructive Temple	728-5720	Wheel (The)	789-0076
Wheel Werks	729-2884	Ramona O9 BBS	789-2084
Fix or Repair Daily BBS	729-0885	Mystic Rainbow	789-4786
Havoc BBS (The)	729-2179	Out of the Closet!!!	789-5562
Nick's Place	729-3877	Claims Connection BBS	789-6897
Ebony's Boudoir BBS	732-3581	Knight's Shadow	792-0455
VSRI Online	735-8585	Another System	792-0634
State of Confusion	736-4256	Mac Underground	792-2394
COM2: Remote	737-0495	Sailing San Diego	792-2785
Cloud 9	737-3097	Louvre	793-0874
Darkwood BBS	737-7132	Renoirs Flying Circus	793-0874
Luv Line	737-8375	Viking BBS	793-6256
Voodoo Lounge	738-1184	Dragon's Nest	855-4406
Thin Blue Line (The)	738-5132	San Diego Connection	855-6771
Possibilities BBS	738-8105	ChatterBox BBS (The)	855-8648
Skeleton Crew BBS (The)	738-8189	Unique Realms (FcXy)	857-1253
MCB BBS	738-9953	H2H BBS	857-6890
CounterEarth BBS	740-0802	San Diego On-Line	857-7332
Conde Communications	740-1345	Imperium Adult BBS	871-4297
GASM	740-9113	M2	888-0395
Ultimate BBS(The)	741-1530	Castle of Deception	894-7456
Phoenix Hawk	742-1731	Summer House BBS	895-3315
Pebble in the Sky	743-2511	Sin-Cit	895-9068
Stardock Omega	743-2740	Dragon's Dreams Elite	895-9623
Crimson Underground	743-6063	Cornerstone Online CBBS	925-5278
Thunder & Lightning	743-7007	House That Jack Built (The)	925-5913
Soul Trip	744-3113	Playground II (The)	940-6319
Enterprise (The)	746-0418	Bootcamp 1	941-0996
Arkham Asylum	747-0346	Rabbit Hole BBS	941-3505
Black Box	747-2304	Windows-R-Us	944-8583
One Step Beyond...	747-3041	Steeple (The)	945-0546
Dream Net	747-4048	Hints & Tips BBS	945-1277
Sharky's MACHine	747-8719	eMpTy V BBS	945-3438
Brewer(The)	748-1817	Free Thought BBS	945-6018
Poway Wildcat	748-4649	Blue Spark BBS	945-8835
Rendezvous 4	748-4686	Nokturnal Basement	945-9093
Poway Rotar	748-4750	Command.Com BBS	945-9242
Rino's Place BBS	748-4913	Next Generation (The)	966-0114
Possibilities BBS	748-5262	Oceanside Bulletin Board Sys.	967-4738
Sgt. Rock's BBS 1	748-5406	Castle Rocks	967-7418
Napalm On-Line	748-6889	PowerLink BBS	967-9354
UGS-EUROPA	748-7923	WeBe Press BBS	974-0014
Chrome Dome Game Room	749-1134	Smitty's	987-9667
PD-SIG Software 1	749-2741	Rendezvous 3	993-3940
Galactic Warzone	753-3688	Workforce Information Network	993-9319
Fly By Knight	754-0129	Summer House BBS	997-4673
Realm of Oblivion	755-3876		
Zeke	755-5675		

THE LIST

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Verona, New Jersey. PCBoard 15.x alpha site. NJ's preferred BBS for the Pro 12 yrs running. 20+ hi-speed 28.8K lines. Charter member BBS Direct provides local access #'s for easy access. Best quality latest files games info gold mine. Many mail networks including Internet. Trial access provided. Major credit cards.

The Board! BBS (201)385-2821
Dumont, New Jersey. Since 10/95 Sysop: Gerry Ferra. Using Galaticomm WorldGroup 1.01 with 8 lines on MS-DOS 486 Pentium, with 12000MB storage Cardinal at 14400. Free trial period. Many different subscption plans. NJ newest system with file areas with 2 CD-ROMs, many games, a casino, and lots of forums. Also we are a local area hub for MajorNet.

Barter America BBS (206)770-2364
Puyallup, Washington. Telnet Access 205.163.70.2 Barter America is now running Worldgroup by Galaticomm Inc. If you like to run your programs under windows we think you will like the changes. The client software is free, download it from us. We accept Visa and Master cards. Slip accounts now available. Browse the Worldwide Web at a low price. Online bartering coming.

The Invention Factory BBS (212)274-8110
New York City, New York. New York's best BBS. Free downloads for new users. More than 14 gig of shareware and freeware. Internet, Usenet, e-mail. Large adult files area. MC Visa Amex.

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New York City, New York. Free Internet mail and Usenet news. Tons of newsgroups. CDRoms with gigabytes of shareware online all the time. We specialize in games including the latest from Apogee and ID. The best buy around. Come cruise by and see what all the excitement is about.

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Los Angeles, California. Members are overwhelmingly adults with adult discussions and forums, but system is open to all. Features Internet, Web & your own home page. Other numbers local to most of Southern California and nationwide via BBS DIRECT, or telnet to liberty.com

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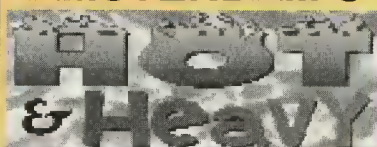
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DVORAK ONLINE

by John C. Dvorak

Lack of Self Promotion Plagues Sex and the BBS Scene

It was a teaser for a TV show. A foghorn-voiced announcer said, "Next we enter the seamy world of sex and drugs..." as he teased some cornball movie. I'm asking myself, "Since when did sex become seamy?" I mean everyone reading this column is here because of it. How did it become seamy? He never says as he then goes on to plug some news story... "film at 11!"

How did sex, a common human function, become seamy? It's because it has no industry trade association promoting a positive perception. So too with the BBS.

Computer bulletin boards are seamy too. Just like sex. They are beneath everyone, especially when compared to the pristine World Wide Web. Any disagreement with that thesis? Well, that is kind of the misperception of things we are left with as the BBS gets left behind as a viable messaging system and as the Internet dominates the scene. Fidonet has been with us for years, but people talk about Internet mail exclusively. Fidonet is "dead."

BBS chat systems have been around forever, and they get the negative publicity while virtually nobody even suggests that the IRC is the sleaziest most racist anti-Semitic system there is! You are always hearing about various BBS busts or about things such as a Nazi-run BBS. Compare that to the coverage (or lack thereof) of the IRC where nobody is surprised that a channel labeled ALL JEWS MUST DIE might be found. Freedom of speech after all.

It's all a matter of PR. The Internet has it and the BBS scene does not. I personally believe that once someone gets into the online scene they will tend to utilize all the systems available: Internet, commercial big systems such as AOL and BBSs.

Of the three, the BBS is the absolute easiest way to grab a file. Luckily most corporations selling software and hardware maintain a BBS site where you can quickly find and download drivers. The commercial systems are fickle about maintaining the most current drivers from my experience and the Web sites are hopeless. First you have to contact the site, which takes forever. Then you have to download from the site which means recontacting the site. For some unknown reason the people who manage the web sites for drivers don't do as good a job as they do on the BBS sites. Maybe it's because the power user most likely to grab such a file knows better than to contact an inefficient "page server" Web site rather than an efficient "live" BBS site. After all you often have to

check more than a few libraries to find what you want and the BBS is much better for plopping around.

But still, the new computer user (and many experienced users) are clueless about the BBS scene. A friend of mine in the business since 1975 made a comment that there are "at least 10,000 BBSs!" not knowing the number is closer to 100,000. A newbie is even more clueless as they often learn about the WWW and are never shown how to use a general purpose telecom program. It's pathetic and the reason it's pathetic is because the BBS community itself has long since dropped the ball.

The orb it dropped was the publicity ball. With 100,000 sites and numerous software suppliers and BBS software vendors, you'd think they'd have their act together. I mean people in the motel business, who make a lot less money, have industry associations that promote the business. People in the dry cleaning business, who make a lot less money, have industry associations that promote the business. People in the egg hatchery business, who make a lot less money, have industry associations that promote the business. If there is a BBS trade association I never heard of it. And how many BBS operators out of 100,000 even bother to attend ONE BBSCON? It's pathetic.

Part of this has to do with the youth and naiveté of many BBS operators and BBS software vendors. Same holds true for the modem makers, to a point. But you'd think there are enough mature and experienced people in the business who would know better. Apparently not. I'm not going to name names but it seems to me that there are a lot of technologists and businessmen in this area who know better than to let this kind of thing slide for so long. I'm always amused when a friend of mine who is a professional Sacramento lobbyist calls me about some horrid anti-BBS law being argued at the State Senate or Assembly. "Where are all the people that this will affect hiding?!" He screeches. Under a rock it seems to me. It's pathetic.

All I can conclude is that the people in the BBS and online business are the same narrow-sighted nerds and greebs who are all over the industry. They know nothing about business but are riding a profit-mobile. They just assume it will end after a few years and they'll go to work coding for Microsoft. They don't understand that it wouldn't end except for the fact that they themselves have done nothing to promote the business that they are in. It's pathetic.

Let me repeat myself. It's pathetic.

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*. John can be reached at mailto: dvorak@aol.com

Dvorak's Recipe Nook

Uses for End of Season Tomatoes

There are plenty of good uses for a classic homemade tomato sauce or marinara sauce. It can be used as a base for a meat sauce. It can be used by itself over ravioli. You can even use it to cover the base of a dish done in the nouvelle style whereby a sauce is under the food, not on top of it. The following recipe is perfect for all these uses, although I wouldn't want to use it as a base for a meat sauce since it's too flavorful and delicate. Also the meat juice would ruin the color.

SAFFRON FLAVORED YELLOW TOMATO SAUCE

Ingredients:

1/8 cup extra virgin olive oil
8 med-large yellow tomatoes chopped and minimally seeded (use various varieties)
two cloves garlic
two tablespoons fresh basil
three bay leaves (Grecian not Laurel Bay)
slice of salami
pinch of quality Spanish or Italian saffron
one dried cayenne pepper whole (or dash of tabasco)
shake of dried tarragon
slice of dried sour dough French bread
one teaspoon powdered chicken stock/bouillon
two tablespoons white wine vinegar
finely ground white pepper

In a sauce pan add the olive oil and sauté the garlic for 5 minutes. Then add the tomatoes, basil, tarragon, slice of salami, slice of bread, cayenne. Simmer for an hour covered over low heat. Add the saffron and continue to cook covered for an additional half hour until the tomatoes are thoroughly cooked. It should boil down to about a cup and a half. Let mixture cool. REMOVE the cayenne, salami slice and the bay leaves. Let mixture cool and put in blender and blend until smooth. Return to saucepan. Add vinegar to acidify mixture. Yellow tomatoes are particularly in need of this acid boost. Taste for seasoning and add powdered chicken stock (instead of salt) until correct degree of saltiness is reached...probably a teaspoon or so. Add white pepper to taste.

The result is a beautiful yellow tomato sauce with a slight saffron hint and deep complex flavors from the bay, tarragon and basil. The saffron and yellow tomatoes also combine to make the sauce an intense beautiful yellow. Try this sauce instead of red sauce over ravioli. Instead of parmesan cheese sprinkle a small amount of finely chopped parsley and a small amount of grated French Mimolette, which is deep orange and combined with the green parsley will contrast nicely with the bright yellow sauce.

Additional notes: The bread is added to help thicken the sauce when finished and blended. This is an old trick and a

way to get rid of stale bread. Nobody would ever know there was bread in this sauce.



I've chosen the spicing for a variety of reasons. Tomato sauce needs basil to have that certain flavor expected of tomato sauce. A flavor that makes it Italian. The French equivalent of Basil insofar as the various cuisines are concerned is Tarragon. I used both with emphasis on Basil. The combination is great.

To add yet a third dimension I used some fresh Bay leaves. I advise people to grow a Grecian Bay tree because this type of leaf is very hard to find as the horrid Laurel Bay is now sold as Bay Leaves. You may as well use Eucalyptus to cook with since the essential oils are similar. By similar I mean they are too pungent and medicinal for any cooking purpose. I don't have a substitute for this ingredient, but I suppose a small amount of oregano wouldn't hurt nor be too far from what I'm looking for taste-wise.

Acid is the overlooked ingredient with many tomato-based sauces. I routinely use Balsamic vinegar for most marinara and spaghetti sauces, but it would be too powerful and too dark for this sauce. A clean flavorful white wine vinegar is my choice here. Always consider the use of vinegar as flavoring and for acidification of any non-cream based sauce. Many flavors do not emerge from sauces if the pH of the sauce is incorrect. The Europeans cook with wine more than we do and the sauces tend to have a better pH balance from the beginning of the process so you don't see much in the way of reference to this acidification necessity. Anyway, experiment with adding Balsamic vinegar to your red sauces for starters and see what you think. ♦

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2. EXEC-PC	414-789-4360	Largest dial up BBS for shareware software	Custom
3. GLIB	703-578-4542	Gay & Lesbian information, Internet email, live chat	TBBS
4. Montarey Gaming System	408-655-5555	Custom interactive gaming and multi-user conferences	Custom
5. Blue Ridge Express	804-790-1675	Large files base with 3 Gigabytes and CD-ROMs	RBBS
6. Deep Cove BBS	804-536-5885	News, publications, Internet email, shareware, games	TBBS
7. AlphaOne Online	708-827-3819	Adults only, matchmaking, personals, Usenet newsgroups	TBBS
8. America's Suggestion Box	516-471-8625	13 Gigs of Shareware, Internet email, shareware	OraComm
9. Lifestyle Genealogy	516-699-5390	Chat system, adult lifestyles, personals, email	TBP
10. Prodigy Genealogy	800-775-7714	Information and help of searching for people	TBBS
11. Chrysalis	214-690-9295	Adults only, matchmaking, BBS lists, Internet email, chat	Wildcat
12. Pleasure Dome BBS	304-490-5878	Online publications, BBS lists, Internet email, chat	TBBS
13. INDEX System, The	717-657-8699	Internet accounts, 10 Gigs online, Fidonet IC	TBBS
14. Pennsylvania Online	413-536-4365	4000 Usenet newsgroups, 8 CD-ROMs, family BBS	Maximus2
15. Springfield Public Access	703-385-4325	OS/2 support and shareware files	PCBoard
16. OS/2 Shareware	215-443-7390	Full Internet, Internet accounts, full Usenet	SHS
17. DSC	614-224-1635	No fees, full access on first call, 12 Gig online	PCBoard
18. Wizard's Gate BBS	708-820-8344	Illinois's largest filebase, message base	TBBS
19. Aquila BBS	615-383-0727	Internet, Usenet, Fidonet, shareware, online games	PCBoard
20. Nashville Exchange, The	919-481-9399	Distribution & support for Telix	RA Pro
1. deltaComm Online	816-587-3311	US & World News, Stock information, national access	Custom
2. File Shop BBS, The	317-359-5199	Largest classified ad database, national access	PCBoard
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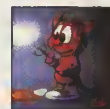
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Copcats are hawking BBS systems by the truckload. Sadly, their claims of greatness are grossly exaggerated. Ho-hum graphics, old DOS-based hosts and limited options make them, shall we say, less than appealing.

NET



If you really want to profit from your BBS system, the bottom line is this: **Excalibur**

The first to run entirely on Windows, Excalibur BBS now has full Internet

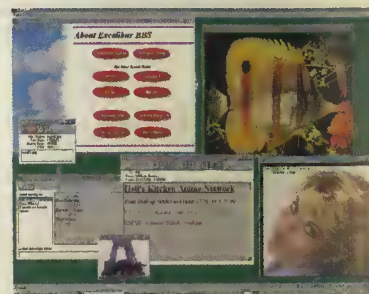
connectivity. All it takes is a simple Internet connection and you can wire your BBS to the world.

And no other system gives you more revolutionary features than Excalibur.

Our new on-line database, Guinevere, is based on HTML, just like the World Wide Web. Excalibur's accelerated bi-directional protocol lets you

transfer files, chat with other users, create messages, play games and more, *all at the same time*.

Plus you can design incredible screens with our



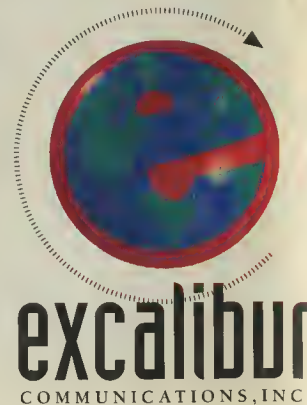
graphical interface, which lets you incorporate lightning-fast object-oriented graphics and scalable TrueType fonts.

What's more, you can insert GIF,

BMP and 24-bit JPEG images. Small wonder that *BBS Magazine* said our graphics "make the likes of America Online pale."

See for yourself why *Windows Magazine* named Excalibur BBS to its 1995 Win 100. (By the way, Excalibur runs great on Windows 95.)

Modem in today at
918.496.8113.



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